ISSN 1992-4526

Statistics of Communicable Diseases and Surveillance Report 2010

Annual
November 2011

Centers for Disease Control,
Department of Health,
R.O.C. (Taiwan)

Statistics of Communicable Diseases and Surveillance Report Republic of China 2010

Annual
November 2011

Edited by
Centers for Disease Control,
Department of Health, R.O.C.(Taiwan)

Chief Editor: Feng-Yee Chang

Associate Editors: Wen-Yi Shi, Jih-Haw Chou, Ying-Hwei Chen
Jen-Hsiang Chuang, Shih-Yan Yang, Ding-Ping Liu
Chin-Hui Yang, Chang-Hsun Chen, Jer-Jea Yan
Ho-Sheng Wu, Zheng-Lou Jiang, Min-Cheng Lin

Executive Editor: Wan-Jen Wu

Published by
Centers for Disease Control,
Department of Health, R.O.C.(Taiwan)

Foreword

I am pleased to present to you the 2010 Statistics of Communicable Diseases and Surveillance Report by Taiwan Centers for Disease Control (Taiwan CDC).

Through everyone's participation and continuous efforts, all acute and chronic infectious diseases that have threatened life have been gradually brought under control. However, in the face of the threat of emerging infectious diseases and faster transmission of cross-border diseases, we are now confronted with new challenges in communicable disease prevention and control.

Based on our past experiences in disease control, our agency always strives to take a versatile, rapid, effective and global approach to the control of infectious diseases. Constructing a highly sensitive, prompt, effective and international disease surveillance system that provides the earliest warning possible has always been among Taiwan CDC's top priorities. It is because an efficient early warning system provides a good basis for disease control. On the other hand, communicable disease statistics and analysis is the most fundamental tool for disease surveillance, public health policy-making and implementation.

As a result of frequent international travel coupled with climate change, emerging and re-emerging infectious diseases have become major public health issues of global concern. For instance, the emergence of NDM-1-

producing Enterobacteriaceae immediately triggered public concern after multiple events of infections caused by the multidrug-resistant bacteria carrying the NDM-1 gene were reported by international media since August, 2010. As the events continue to draw international attention, Taiwan CDC has also established relevant disease reporting system and laboratory testing mechanism. In order to implement necessary disease surveillance and control activities, NDM-1 Enterobacteriaceae infection was included in the list of Category IV Notifiable Infectious Diseases on September 9, 2010, and the first imported confirmed case was later identified.

Each year, the major acute infectious diseases that occur in Taiwan include influenza, dengue fever and enterovirus infection and the major chronic infectious diseases that occur in Taiwan include tuberculosis and HIV/AIDS. In order to integrate resources and strengthen the integration of logistic horizontal and longitudinal activities, Taiwan CDC submits a request in writing to the Cabinet depending on the assessment of the epidemic situation for the establishment of Central Epidemic Command Center to magnify the effectiveness of disease prevention and control activities. For instance, in 2010, as the dengue fever epidemic was more serious than that in previous years, on October 21, the Central Epidemic Command Center for Dengue Epidemic was established in response to the situation. Through joint efforts by the central and local governments as well as medical institutions and environmental protection units and public cooperation to eliminate vector breeding sites, the epidemic finally abated and was brought under effective control.

This annual report records all statistics on epidemiological situations of communicable disease in Taiwan in 2010. I hope this annual report can enhance public awareness and understanding of communicable disease

surveillance and control. To further improve the publication, any comments and suggestions from readers and experts in all fields would be greatly appreciated. In the future, we will act on our agency's core values of "Humanity, Professionalism, Proactivity, Teamwork and Communication" to continue our duties and making Taiwan a healthier country to live in.

Feng-Yee Chang
Director-General
Centers for Disease Control, Taiwan

Statistics of Communicable Diseases and Surveillance Report 2010

Republic of China

Contents

Foreword I

Contents V

Explanatory Notes VIII

I. Summary Tables and Graphs for Confirmed Cases

Table 1 Confirmed cases number of notifiable diseases — by locality, 2010 2

Table 2 Confirmed cases number and incidence rate of notifiable diseases — by age group, 2010 12

Table 3 Confirmed cases number of notifiable diseases — by month, 2010 18

Table 4 Confirmed cases number and incidence rate of notifiable diseases — by sex, 2010 21

Table 5 Confirmed cases number of notifiable diseases — by year, 2001-2010 24

Table 6 Analysis of time intervals between diagnosis and reporting for notifiable diseases — by locality, 2010 27

Table 7 Analysis of time intervals between reporting and reports received for notifiable diseases — by locality, 2010 28

Table 8 Analysis of time intervals between reports received from local health bureau to Taiwan CDC for notifiable diseases — by locality, 2010 29

Table 9 Cases of Acute Flaccid Paralysis, Neonatal Tetanus, Congenital Rubella Syndrome and Measles Eradication Program — by locality, 2010 30

Table 10 National immunization coverage — by counties/cities 32

Figure 1 Comparison of 2010 total confirmed cases of notifiable diseases with historical data 36

II. Specific Surveillance Systems

Nosocomial Infections Surveillance System 42
School-based Surveillance System 49
Laboratory Surveillance System 55
Quarantine Service 60
Mosquito Surveillance 64
Symptom Surveillance System 68
Real-time Outbreak and Diseases Surveillance System 75
Disease Surveillance using National Health Insurance Data 79
Pneumonia and Influenza Mortality Surveillance 82

III. Surveillance Reports of Selected Diseases

Measles 86
Pertussis 89
Meningococcal Meningitis 92
Japanese Encephalitis 95
Acute Hepatitis A 98
Acute Hepatitis B 101
Acute Hepatitis C 104
Scrub Typhus 107
Legionellosis 110
Dengue Fever 113
Enteroviruses Infection with Severe Complications 117
Malaria 120
Shigellosis 123
Severe Complicated Influenza Case 127
Syphilis 130
Gonorrhea 133
HIV Infection & AIDS 136
Tuberculosis 142

IV. Appendix

1. List of cases number update 154
2. Regulations for notifiable diseases 155
3. Report of cases of communicable and emerging infectious diseases, include suspected cases 156
4. 2010 calendar for re-defined months 158

Acknowledgement

159

Explanatory Notes

1.Taiwan in this Report includes Taiwan Island, Penghu, Kinmen and Matsu.

2.The Report includes the notifiable diseases* and other relevant communicable diseases. Sources of information "Report of cases of communicable and emerging infectious disease, include suspected cases"** are filled or submitted on-line by medical personnel and reported to local health agencies.

3.Definitions of terms used in the Report:

(1) Notifiable diseases: Communicable diseases listed in Article 3.

(2) Reported cases: Cases of communicable disease or suspected cases detected by physicians while diagnosing and treating patients, and statistic of reported cases using the "Report of cases of communicable and emerging infectious disease, include suspected cases" form.

(3) Confirmed cases: For most notifiable diseases, reported cases that are diagnosed or found positive by Taiwan CDC's laboratory or other verified institutions are determined as confirmed cases. For some notifiable diseases, confirmation of infection should meet the clinical symptoms and epidemiological criteria. For a few notifiable diseases, confirmation of infection should be determined by an expert meeting. Please refer to the ''Guidelines for Notifiable Communicable Diseases Surveillance" to see the case definition of each disease.

(4) SMYF Program (a.k.a the fourth phase of the Poliomyelitis, Neonatal Tetanus, Congenital Rubella Syndrome and Measles Eradication Program): The Executive Yuan approved the implementation of the first phase of the program in 1990. The program was implemented from 1991 through 1996. The second phase of the program was approved in 1996 and implemented from 1997 through 2001. The third phase of the program was approved in 2001 and has been implemented since 2002 to 2006. The fourth phase of the program was approved in 2006 and

has been implemented since 2007 to 2011. The goal of the program is to eradicate Measles by 2010 and keep Neonatal Tetanus, Congenital Rubella Syndrome and Poliomyelitis under effective control.

(5) Unspecified hepatitis: Cases that are non-A / non-B hepatitis and that can neither be classified as hepatitis C, D or E.

4.Analysis standards:

(1) By locality: The actual residential locality of the confirmed case.

(2) By age group: The actual age of the confirmed case.

(3) By month: The actual disease onset month of the confirmed case. The number of Syphilis, Gonorrhea, HIV Infection, AIDS and Hansen's disease were estimated from the day of diagnostic. The number of TB was estimated by the day of notified.

(4) By year: The actual disease onset year of the confirmed case. The number of Syphilis, Gonorrhea, HIV infection, AIDS and Hansen's disease were estimated from the day of diagnostic. The number of TB was estimated by the day of notified.

(5) By week: The epidemiological week calendar established by the World Health Organization's (WHO) is adopted. Please refer to Appendix 4 for further details.

(6) In the 1999 annual statistics report, the tuberculosis statistics included only confirmed cases of open (active) and non-open (non-active) pulmonary tuberculosis, but not cases of pulmonary tuberculosis complicated with non-pulmonary tuberculosis. In compliance with the amendment made to the Communicable Diseases Control Act in 1999 and the intensified control of open pulmonary tuberculosis, CDC began to include and tabulate open pulmonary tuberculosis (including open pulmonary tuberculosis and open pulmonary tuberculosis with pulmonary and non-pulmonary complications) and other tuberculosis (all tuberculosis cases except the aforementioned open pulmonary tuberculosis) in the tuberculosis statistics. For international comparison, Tuberculosis has been categorized as smear positive and others in 2006.

(7) Starting from 2002, only Taiwanese HIV infection and AIDS cases are analyzed.

(8) From 2000 to 2005, Mumps and Varicella had been reported with secondary data; and had been reported with detailed information since January 1, 2006.

(9) Mid-Year Population: The mid-year population comes from the “2010 Demographic Fact Book, Republic of China” by the Ministry of the Interior and which is used to calculate the incidence rate of diseases.

(10) Beginning in 2002, the historical information will not be amended. Any correction made to such information will be listed in the appendix 1. The analysis baseline in 2010 was based on the data before 2011/5/1.

(11) The statistics of MDR-TB (Multi-drug resistant tuberculosis) , Chikungunya Fever, Neonatal Tetanus, Herpesvirus B Infection, Leptospirosis, Melioidosis, Botulism, Invasive Pneumococcal Disease, Q Fever, Endemic Typhus Fever, Lyme Disease, Tularemia, Cat-Scratch Disease, Toxoplasmosis and Creutzfeldt-Jakob Disease were conducted with the proclamation of “Categories of Communicable Diseases and Prophylaxis of Category IV and V” proclaimed on October 9, 2007, and were validated since October 15, 2007.

(12) Leprosy were renamed as Hansen's disease and HIV infection were belong to category III of communicable disease Since Nov. 1, 2008, announced under Sue-So-Ji No. 0970001187 on October 24, 2008.

(13) According to the Shu-So-Ji- No. 0980000531 announcement on April 27, 2009 titled amendment of the “communicable disease classification”, the “Influenza A (H1N1)” was added to the Category I Notifiable Communicable Diseases. Later, amendment of the “communicable disease classification” was made in the Shu-So-Ji No. 0980000829 announcement on June 19, 2009 to delete the “Influenza A (H1N1)” from the Category I Notifiable Communicable Diseases. Any Influenza A (H1N1) cases with severe complications should be reported in accordance with regulations applicable to Category IV Notifiable Communicable Diseases, and subject to that

category's corresponding prevention and control measures.

(14) According to the Department of Health's Bulletin No. Shu-Shou-Ji-Zi-0990001077 dated September 9, 2010, NDM-1 Enterobacteriaceae infection has been included in the list of Category IV Notifiable Communicable Diseases.

5.Symbols:"-" for no reported cases; "…" for not under surveillance.

---

* Please see Appendix 1 for classification of communicable diseases.

** Please see Appendix 3 for the form of "Report of cases of communicable and emerging infectious disease, include suspected cases".

I Summary Tables and Graphs for Confirmed Cases

—Republic of China (Taiwan), 2010

◎Abbreviations and Symbols Used in Table

— No reported cases.

… Not under surveillance.

Table 1 Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Midyear population	Category I					
		Smallpox	Plague	SARS	Rabies	Anthrax	H5N1 Influenza
Total	23,140,948	-	-	-	-	-	-
Taipei Area							
Taipei City	2,613,100	-	-	-	-	-	-
Taipei County	3,885,510	-	-	-	-	-	-
Keelung City	386,228	-	-	-	-	-	-
Yilan County	461,055	-	-	-	-	-	-
Kinmen County	95,583	-	-	-	-	-	-
Lienchiang County	9,932	-	-	-	-	-	-
Northern Area							
Taoyuan County	1,990,421	-	-	-	-	-	-
Hsinchu City	413,465	-	-	-	-	-	-
Hsinchu County	511,948	-	-	-	-	-	-
Miaoli County	561,356	-	-	-	-	-	-
Central Area							
Taichung City	1,077,967	-	-	-	-	-	-
Taichung County	1,564,123	-	-	-	-	-	-
Changhua County	1,309,877	-	-	-	-	-	-
Nantou County	528,658	-	-	-	-	-	-
Southern Area							
Yunlin County	720,224	-	-	-	-	-	-
Chiayi City	273,126	-	-	-	-	-	-
Chiayi County	545,482	-	-	-	-	-	-
Tainan City	771,667	-	-	-	-	-	-
Tainan County	1,102,933	-	-	-	-	-	-
Kao-Ping Area							
Kaohsiung City	1,528,931	-	-	-	-	-	-
Kaohsiung County	1,243,255	-	-	-	-	-	-
Pingtung County	878,074	-	-	-	-	-	-
Penghu County	96,564	-	-	-	-	-	-
Eastern Area							
Hualien County	339,884	-	-	-	-	-	-
Taitung County	231,585	-	-	-	-	-	-
Others		-	-	-	-	-	-

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Category II							
	Diphtheria	Typhoid[1] Fever	Dengue[1] Fever	Dengue[1] Hemorrhagic Fever / Dengue Shock Syndrome	Meningococcal Meningitis	Paratyphoid[1] Fever	Poliomyelitis	Acute[2] Flaccid Paralysis
Total	-	33	1,896	21	7	12	-	49
Taipei Area								
Taipei City	-	2	60	-	-	5	-	3
Taipei County	-	8	74	-	2	2	-	3
Keelung City	-	-	3	-	-	-	-	1
Yilan County	-	-	3	-	1	1	-	-
Kinmen County	-	-	1	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-	-
Northern Area								
Taoyuan County	-	3	39	-	1	2	-	6
Hsinchu City	-	-	2	-	-	-	-	-
Hsinchu County	-	5	9	-	-	-	-	-
Miaoli County	-	-	7	-	-	-	-	1
Central Area								
Taichung City	-	1	14	-	-	2	-	2
Taichung County	-	1	21	1	1	-	-	2
Changhua County	-	1	9	-	-	-	-	2
Nantou County	-	-	5	1	-	-	-	1
Southern Area								
Yunlin County	-	2	5	-	-	-	-	3
Chiayi City	-	1	4	-	-	-	-	1
Chiayi County	-	-	9	-	-	-	-	1
Tainan City	-	2	390	8	-	-	-	-
Tainan County	-	1	115	4	1	-	-	4
Kao-Ping Area								
Kaohsiung City	-	2	1,009	6	-	-	-	7
Kaohsiung County	-	1	97	1	1	-	-	3
Pingtung County	-	1	17	-	-	-	-	7
Penghu County	-	1	-	-	-	-	-	1
Eastern Area								
Hualien County	-	1	2	-	-	-	-	1
Taitung County	-	-	1	-	-	-	-	-
Others	-	-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including 11 typhoid fever, 304 dengue fever, three dengue hemorrhagic fever / dengue shock syndrome and 12 paratyphoid fever.

[2]Acute flaccid paralysis cases above 15 years old had been excluded since 2005.

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Midyear population	Category II						
		Shigellosis[1]	Amoebiasis[1]	Malaria[1]		Measles[1]	Acute[1] Hepatitis A	Enterohaemo-rrhagic *E. coli* Infection
				Indigenous	Imported			
Total	23,140,948	172	262	-	21	12	110	-
Taipei Area								
Taipei City	2,613,100	22	44	-	5	5	12	-
Taipei County	3,885,510	29	33	-	4	2	23	-
Keelung City	386,228	1	2	-	1	-	3	-
Yilan County	461,055	6	11	-	-	-	-	-
Kinmen County	95,583	-	-	-	-	-	-	-
Lienchiang County	9,932	-	-	-	-	-	-	-
Northern Area								
Taoyuan County	1,990,421	17	17	-	2	-	15	-
Hsinchu City	413,465	6	4	-	-	-	1	-
Hsinchu County	511,948	5	6	-	-	1	5	-
Miaoli County	561,356	3	5	-	1	-	7	-
Central Area								
Taichung City	1,077,967	2	17	-	3	-	7	-
Taichung County	1,564,123	11	9	-	1	2	6	-
Changhua County	1,309,877	1	12	-	1	-	3	-
Nantou County	528,658	4	7	-	-	-	2	-
Southern Area								
Yunlin County	720,224	-	3	-	-	-	-	-
Chiayi City	273,126	1	2	-	-	-	-	-
Chiayi County	545,482	2	15	-	1	-	1	-
Tainan City	771,667	4	6	-	1	-	6	-
Tainan County	1,102,933	1	10	-	1	-	3	-
Kao-Ping Area								
Kaohsiung City	1,528,931	2	16	-	-	-	6	-
Kaohsiung County	1,243,255	2	14	-	-	2	6	-
Pingtung County	878,074	2	10	-	-	-	2	-
Penghu County	96,564	-	3	-	-	-	1	-
Eastern Area								
Hualien County	339,884	51	11	-	-	-	-	-
Taitung County	231,585	-	5	-	-	-	1	-
Others		-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including 82 shigellosis, 139 amoebiasis, 21 malaria, six measles and 15 acute hepatitis A.

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Category II							
	Hantavirus Syndrome		Cholera	Rubella[1]	MDR-TB[3]	Chikungunya[1] Fever	West Nile Fever	Epidemic Typhus Fever
	Hemorrhagic Fever with Renal Syndrome	Hantavirus Pulmonary Syndrome						
Total	1	-	5	21	156	13	-	-
Taipei Area								
Taipei City	-	-	2	8	10	2	-	-
Taipei County	1	-	-	5	24	-	-	-
Keelung City	-	-	-	-	3	-	-	-
Yilan County	-	-	-	-	3	1	-	-
Kinmen County	-	-	-	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-	-
Northern Area								
Taoyuan County	-	-	1	1	7	3	-	-
Hsinchu City	-	-	-	3	4	-	-	-
Hsinchu County	-	-	-	-	3	1	-	-
Miaoli County	-	-	-	-	-	1	-	-
Central Area								
Taichung City	-	-	1	-	4	-	-	-
Taichung County	-	-	-	-	11	1	-	-
Changhua County	-	-	-	-	8	1	-	-
Nantou County	-	-	-	-	9	-	-	-
Southern Area								
Yunlin County	-	-	-	-	5	-	-	-
Chiayi City	-	-	-	-	1	-	-	-
Chiayi County	-	-	-	-	3	-	-	-
Tainan City	-	-	-	-	3	-	-	-
Tainan County	-	-	-	-	7	1	-	-
Kao-Ping Area								
Kaohsiung City	-	-	-	1	15	1	-	-
Kaohsiung County	-	-	-	1	11	-	-	-
Pingtung County	-	-	1	-	6	-	-	-
Penghu County	-	-	-	-	-	1	-	-
Eastern Area								
Hualien County	-	-	-	-	14	-	-	-
Taitung County	-	-	-	2	5	-	-	-
Others	-	-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including 11 rubella and 13 chikungunya fever.
[3]The caseload of MDR-TB was calculated based on CDC's registration date.

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Midyear population	Category III							
		Pertussis	Tetanus[5]	Japanese[1] Encephalitis	Tuberculosis[3]		Congenital Rubella Syndrome	Acute[1] Hepatitis B	Acute Hepatitis C
					Smear-positive	Others			
Total	23,140,948	61	12	33	5,027	8,210	-	172	41
Taipei Area									
Taipei City	2,613,100	21	-	2	375	707	-	28	7
Taipei County	3,885,510	21	2	3	761	1,303	-	49	5
Keelung City	386,228	-	-	-	106	147	-	8	1
Yilan County	461,055	3	-	1	130	147	-	-	1
Kinmen County	95,583	-	-	-	11	22	-	-	-
Lienchiang County	9,932	1	-	-	-	2	-	-	-
Northern Area									
Taoyuan County	1,990,421	1	-	2	342	586	-	12	1
Hsinchu City	413,465	-	-	-	54	98	-	2	-
Hsinchu County	511,948	1	-	-	87	136	-	6	-
Miaoli County	561,356	-	1	2	87	130	-	5	3
Central Area									
Taichung City	1,077,967	4	1	1	162	398	-	9	3
Taichung County	1,564,123	1	-	1	248	518	-	2	-
Changhua County	1,309,877	1	1	4	346	458	-	6	-
Nantou County	528,658	1	1	-	166	227	-	6	1
Southern Area									
Yunlin County	720,224	-	2	2	215	328	-	2	2
Chiayi City	273,126	-	-	-	66	78	-	1	1
Chiayi County	545,482	-	-	2	126	202	-	3	3
Tainan City	771,667	-	1	1	149	257	-	5	1
Tainan County	1,102,933	-	-	3	224	406	-	11	3
Kao-Ping Area									
Kaohsiung City	1,528,931	-	1	1	391	635	-	2	7
Kaohsiung County	1,243,255	-	1	1	386	609	-	5	2
Pingtung County	878,074	-	-	4	316	508	-	3	-
Penghu County	96,564	1	-	-	3	14	-	1	-
Eastern Area									
Hualien County	339,884	4	1	2	171	168	-	6	-
Taitung County	231,585	1	-	1	105	126	-	-	-
Others		-	-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including one Japanese encephalitis and 10 acute hepatitis B.

[3]The caseload of tuberculosis was estimated based on notification date.

[5]Calculation for tetanus was based on reported cases only.

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Category III							
	Acute Hepatitis			Mumps[5]	Legionellosis[1]	Invasive Haemophilus Influenzae Type b Infection	Syphilis[6]	Gonorrhea[6]
	D	E[1]	Un-specified					
Total	1	7	13	1,125	102	12	6,482	2,265
Taipei Area								
Taipei City	-	1	-	197	18	-	954	561
Taipei County	-	2	2	241	17	1	1,320	682
Keelung City	-	-	-	29	1	-	118	73
Yilan County	-	-	1	38	1	-	161	15
Kinmen County	-	-	-	6	-	-	6	1
Lienchiang County	-	-	-	-	-	-	-	-
Northern Area								
Taoyuan County	-	2	-	123	5	1	636	195
Hsinchu City	-	-	-	18	-	1	108	47
Hsinchu County	-	-	-	38	2	1	101	55
Miaoli County	-	-	-	29	2	2	109	57
Central Area								
Taichung City	-	-	-	27	2	-	361	47
Taichung County	-	-	-	37	5	1	357	78
Changhua County	-	-	1	32	6	1	233	30
Nantou County	-	-	-	28	-	-	99	19
Southern Area								
Yunlin County	-	-	-	20	4	-	158	31
Chiayi City	-	-	-	2	1	-	50	18
Chiayi County	-	-	1	8	1	-	114	23
Tainan City	1	1	2	8	8	1	125	65
Tainan County	-	-	2	19	13	-	243	78
Kao-Ping Area								
Kaohsiung City	-	1	1	81	6	-	413	69
Kaohsiung County	-	-	2	78	6	-	382	38
Pingtung County	-	-	1	33	2	-	248	49
Penghu County	-	-	-	2	-	-	16	1
Eastern Area								
Hualien County	-	-	-	19	2	1	120	18
Taitung County	-	-	-	12	-	2	50	15
Others	-	-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including two acute hepatitis E and four legionellosis.
[5]Calculation for mumps was based on reported cases only.
[6]The caseload of syphilis and gonorrhea were estimated based on diagnosis date.

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Midyear population	Category III					Category IV	
		Neonatal Tetanus	Enteroviruses[1] Infection with Severe Complications	HIV [7] Infection	AIDS[7]	Hansen's[4,6] Disease	Herpesvirus B Infection	Leptospirosis[1]
Total	23,140,948	-	16	1,796	1,087	5	-	77
Taipei Area								
Taipei City	2,613,100	-	1	299	138	-	-	7
Taipei County	3,885,510	-	2	420	216	2	-	21
Keelung City	386,228	-	-	23	10	-	-	-
Yilan County	461,055	-	1	12	8	-	-	3
Kinmen County	95,583	-	-	1	-	-	-	-
Lienchiang County	9,932	-	-	-	-	-	-	-
Northern Area								
Taoyuan County	1,990,421	-	5	179	129	-	-	6
Hsinchu City	413,465	-	-	38	24	-	-	2
Hsinchu County	511,948	-	-	25	16	1	-	-
Miaoli County	561,356	-	-	26	19	-	-	1
Central Area								
Taichung City	1,077,967	-	-	129	73	-	-	5
Taichung County	1,564,123	-	-	86	45	1	-	4
Changhua County	1,309,877	-	1	51	38	-	-	-
Nantou County	528,658	-	1	21	27	-	-	2
Southern Area								
Yunlin County	720,224	-	1	26	29	1	-	2
Chiayi City	273,126	-	1	8	6	-	-	2
Chiayi County	545,482	-	-	13	19	-	-	-
Tainan City	771,667	-	-	40	29	-	-	1
Tainan County	1,102,933	-	-	38	38	-	-	-
Kao-Ping Area								
Kaohsiung City	1,528,931	-	-	172	88	-	-	4
Kaohsiung County	1,243,255	-	3	108	75	-	-	2
Pingtung County	878,074	-	-	52	33	-	-	9
Penghu County	96,564	-	-	1	1	-	-	-
Eastern Area								
Hualien County	339,884	-	-	19	16	-	-	2
Taitung County	231,585	-	-	9	10	-	-	4
Others		-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including one enteroviruses infection with severe complications and two leptospirosis.

[4]The confirmed cases of Hansen's disease included two Taiwanese and three Indonesian.

[6]The caseload of Hansen's disease was estimated based on diagnosis date.

[7]The caseload of HIV infection and AIDS were estimated based on diagnosis date, and the cases of foreign nationality were excluded.

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Category IV						
	Melioidosis	Botulism	Invasive Pneumococcal Disease	Q Fever[1]	Endemic[1] Typhus Fever	Lyme Disease	Tularemia
Total	45	11	737	89	42	-	-
Taipei Area							
Taipei City	-	-	51	1	1	-	-
Taipei County	-	1	122	6	3	-	-
Keelung City	-	-	16	-	-	-	-
Yilan County	-	-	26	-	-	-	-
Kinmen County	-	-	-	1	-	-	-
Lienchiang County	-	-	-	-	-	-	-
Northern Area							
Taoyuan County	1	4	65	1	1	-	-
Hsinchu City	-	-	8	-	-	-	-
Hsinchu County	-	-	28	-	-	-	-
Miaoli County	-	2	5	-	1	-	-
Central Area							
Taichung City	-	-	23	2	2	-	-
Taichung County	-	2	60	2	3	-	-
Changhua County	1	-	48	5	4	-	-
Nantou County	-	-	18	1	-	-	-
Southern Area							
Yunlin County	-	1	22	3	1	-	-
Chiayi City	-	-	9	-	-	-	-
Chiayi County	1	-	20	-	-	-	-
Tainan City	2	-	26	2	1	-	-
Tainan County	3	-	35	12	2	-	-
Kao-Ping Area							
Kaohsiung City	20	1	36	10	4	-	-
Kaohsiung County	14	-	53	31	12	-	-
Pingtung County	1	-	37	11	7	-	-
Penghu County	1	-	1	-	-	-	-
Eastern Area							
Hualien County	-	-	13	-	-	-	-
Taitung County	1	-	15	1	-	-	-
Others	-	-	-	-	-	-	-

Note:[1]The case amount in 2010 contained imported cases, including four Q fever and four endemic typhus fever.

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Midyear population	Category IV					
		Scrub[1] Typhus	Varicella[5]	Cat-Scratch Disease	Toxoplasmosis	Severe[1] Complicated Influenza Case	Creutzfeldt-[6,11] Jakob Disease
Total	23,140,948	402	9,218	65	5	882	-
Taipei Area							
Taipei City	2,613,100	24	2,065	7	-	59	-
Taipei County	3,885,510	30	2,606	14	-	162	-
Keelung City	386,228	3	238	2	-	8	-
Yilan County	461,055	9	179	1	-	8	-
Kinmen County	95,583	50	17	-	-	-	-
Lienchiang County	9,932	17	-	-	-	-	-
Northern Area							
Taoyuan County	1,990,421	7	636	6	1	43	-
Hsinchu City	413,465	2	351	1	-	10	-
Hsinchu County	511,948	3	316	5	-	11	-
Miaoli County	561,356	4	230	-	-	21	-
Central Area							
Taichung City	1,077,967	3	245	2	-	15	-
Taichung County	1,564,123	9	266	2	-	25	-
Changhua County	1,309,877	7	338	6	-	32	-
Nantou County	528,658	17	104	-	1	10	-
Southern Area							
Yunlin County	720,224	4	115	1	1	30	-
Chiayi City	273,126	-	48	-	-	10	-
Chiayi County	545,482	3	94	1	1	31	-
Tainan City	771,667	5	173	1	-	51	-
Tainan County	1,102,933	5	186	3	-	48	-
Kao-Ping Area							
Kaohsiung City	1,528,931	23	359	3	1	76	-
Kaohsiung County	1,243,255	11	225	3	-	68	-
Pingtung County	878,074	7	166	1	-	38	-
Penghu County	96,564	36	36	-	-	5	-
Eastern Area							
Hualien County	339,884	47	168	3	-	109	-
Taitung County	231,585	76	57	3	-	12	-
Others		-	-	-	-	-	-

Note:[1]The case amount in 2010 contained imported cases, including one scrub typhus and nine severe complicated influenza case.

[5]Calculation for varicella was based on reported cases only.

[6]The caseload of Creutzfeldt-Jakob disease was estimated based on diagnosis date.

[11]The first probable case of variant Creutzfeldt-Jakob disease (vCJD) in Taiwan who died in 2010 was adopted in 2010's CJD surveillance data and was categorized as an imported case due to resided in UK for 8 years (1989-1997) with exposedness across the prevalent period of bovine spongiform encephalopathy (BSE).

Table 1 (Continued) Confirmed cases number of notifiable diseases — by locality, 2010

Unit：Person

Area / Locality	Category IV	Category V				
	NDM-1[1,10] Enterobacteriaceae	Rift Valley Fever	Marburg Haemorrhagic Fever	Yellow Fever	Ebola Haemorrhagic Fever	Lassa Fever
Total	1	-	-	-	-	-
Taipei Area						
Taipei City	-	-	-	-	-	-
Taipei County	-	-	-	-	-	-
Keelung City	-	-	-	-	-	-
Yilan County	-	-	-	-	-	-
Kinmen County	-	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-
Northern Area						
Taoyuan County	1	-	-	-	-	-
Hsinchu City	-	-	-	-	-	-
Hsinchu County	-	-	-	-	-	-
Miaoli County	-	-	-	-	-	-
Central Area						
Taichung City	-	-	-	-	-	-
Taichung County	-	-	-	-	-	-
Changhua County	-	-	-	-	-	-
Nantou County	-	-	-	-	-	-
Southern Area						
Yunlin County	-	-	-	-	-	-
Chiayi City	-	-	-	-	-	-
Chiayi County	-	-	-	-	-	-
Tainan City	-	-	-	-	-	-
Tainan County	-	-	-	-	-	-
Kao-Ping Area						
Kaohsiung City	-	-	-	-	-	-
Kaohsiung County	-	-	-	-	-	-
Pingtung County	-	-	-	-	-	-
Penghu County	-	-	-	-	-	-
Eastern Area						
Hualien County	-	-	-	-	-	-
Taitung County	-	-	-	-	-	-
Others	-	-	-	-	-	-

Note:[1]One confirmed case of NDM-1 enterobacteriaceae was imported in 2010.
[10]NDM-1 enterobacteriaceae has belonged to the list of Category IV Notifiable Disease since September 9, 2010.

Table 2 Confirmed cases number and incidence[8] rate of notifiable diseases — by age group, 2010

Unit：Person

Disease	＜1 yr		1-4 yrs		5-14 yrs		15-24 yrs		25-39 yrs	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category I										
Smallpox	-	-	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-
SARS	-	-	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-	-
H5N1 Influenza	-	-	-	-	-	-	-	-	-	-
Category II										
Diphtheria	-	-	-	-	-	-	-	-	-	-
Typhoid Fever[1]	-	-	4	0.49	6	0.22	6	0.19	8	0.14
Dengue Fever[1]	-	-	11	1.35	126	4.64	219	6.84	451	7.88
Dengue Hemorrhagic Fever /[1] Dengue Shock Syndrome	-	-	1	0.12	2	0.07	-	-	2	0.03
Meningococcal Meningitis	1	0.59	1	0.12	-	-	1	0.03	3	0.05
Paratyphoid Fever[1]	-	-	-	-	-	-	1	0.03	7	0.12
Poliomyelitis	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	3	1.77	15	1.84	31	1.14	-	-	-	-
Shigellosis[1]	-	-	18	2.21	39	1.43	28	0.87	45	0.79
Amoebiasis[1]	-	-	-	-	1	0.04	38	1.19	139	2.43
Malaria[1]										
Indigenous	-	-	-	-	-	-	-	-	-	-
Imported	-	-	-	-	-	-	3	0.09	8	0.14
Measles[1]	1	0.59	2	0.25	1	0.04	3	0.09	5	0.09
Acute Hepatitis A[1]	-	-	2	0.25	7	0.26	20	0.62	49	0.86
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome										
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-	1	0.02
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-	-	-
Cholera	-	-	1	0.12	-	-	-	-	1	0.02

Note: [1]The case amount in 2010 contained imported cases, including 11 typhoid fever, 304 dengue fever, three dengue hemorrhagic fever /dengue shock syndrome, 12 paratyphoid fever, 82 shigellosis, 139 amoebiasis, 21 malaria, six measles and 15 acute hepatitis A.

[2]Acute flaccid paralysis cases above 15 years old had been excluded since 2005.

[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.

Table 2 (Continued) Confirmed cases number and incidence[8] rate of notifiable diseases — by age group, 2010

Unit：Person

Disease	40-64 yrs		≥ 65 yrs		Age not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category I								
Smallpox	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-
SARS	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-
H5N1 Influenza	-	-	-	-	-	-	-	-
Category II								
Diphtheria	-	-	-	-	-	-	-	-
Typhoid Fever[1]	5	0.06	4	0.16	-	-	33	0.14
Dengue Fever[1]	769	9.56	320	12.94	-	-	1,896	8.19
Dengue Hemorrhagic Fever /[1] Dengue Shock Syndrome	2	0.02	14	0.57	-	-	21	0.09
Meningococcal Meningitis	-	-	1	0.04	-	-	7	0.03
Paratyphoid Fever[1]	4	0.05	-	-	-	-	12	0.05
Poliomyelitis	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	-	-	-	-	-	-	49	0.21
Shigellosis[1]	29	0.36	13	0.53	-	-	172	0.74
Amoebiasis[1]	55	0.68	29	1.17	-	-	262	1.13
Malaria[1]								
Indigenous	-	-	-	-	-	-	-	-
Imported	10	0.12	-	-	-	-	21	0.09
Measles[1]	-	-	-	-	-	-	12	0.05
Acute Hepatitis A[1]	22	0.27	10	0.40	-	-	110	0.48
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-
Hantavirus Syndrome								
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	1	<0.01
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-
Cholera	2	0.02	1	0.04	-	-	5	0.02

Note: [1]The case amount in 2010 contained imported cases, including 11 typhoid fever, 304 dengue fever, three dengue hemorrhagic fever /dengue shock syndrome, 12 paratyphoid fever, 82 shigellosis, 139 amoebiasis, 21 malaria, six measles and 15 acute hepatitis A.

[2]Acute flaccid paralysis cases above 15 years old had been excluded since 2005.

[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.

Table 2 (Continued) Confirmed cases number and incidence[8] rate of notifiable diseases — by age group, 2010

Unit：Person

Disease	＜1 yr		1-4 yrs		5-14 yrs		15-24 yrs		25-39 yrs	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category II										
Rubella[1]	-	-	-	-	1	0.04	3	0.09	12	0.21
MDR-TB[3]	-	-	-	-	1	0.04	5	0.16	22	0.38
Chikungunya Fever[1]	-	-	-	-	1	0.04	1	0.03	9	0.16
West Nile Fever	-	-	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-
Category III										
Pertussis	24	14.12	8	0.98	10	0.37	3	0.09	10	0.17
Tetanus[5]	2	1.18	-	-	-	-	-	-	-	-
Japanese Encephalitis[1]	-	-	1	0.12	-	-	2	0.06	9	0.16
Tuberculosis[3]										
Smear-positive	-	-	1	0.12	10	0.37	176	5.50	498	8.70
Others	2	1.18	13	1.60	55	2.02	456	14.24	864	15.10
Congenital Rubella Syndrome	-	-	-	-	-	-	-	-	-	-
Acute Hepatitis										
B[1]	-	-	-	-	-	-	24	0.75	88	1.54
C	-	-	-	-	1	0.04	2	0.06	12	0.21
D	-	-	-	-	-	-	-	-	-	-
E[1]	-	-	-	-	-	-	-	-	3	0.05
Unspecified	1	0.59	1	0.12	-	-	1	0.03	1	0.02
Mumps[5]	5	2.94	218	26.81	547	20.12	93	2.90	117	2.04
Legionellosis[1]	-	-	-	-	-	-	2	0.06	6	0.10
Invasive Haemophilus Influenzae Type b Infection	-	-	4	0.49	3	0.11	-	-	1	0.02
Syphilis[6]	21	12.36	-	-	3	0.11	713	22.27	2,017	35.25
Gonorrhea[6]	1	0.59	-	-	2	0.07	588	18.37	1,290	22.54
Neonatal Tetanus	-	-	-	-	-	-	-	-	-	-
Enteroviruses Infection with[1] Severe Complications	6	3.53	9	1.11	1	0.04	-	-	-	-
HIV Infection[7]	-	-	-	-	2	0.07	468	14.62	975	17.04
AIDS[7]	-	-	-	-	-	-	126	3.94	591	10.33

Note: [1]The case amount in 2010 contained imported cases, including 11 rubella,13 chikungunya fever, one Japanese encephalitis, 10 acute hepatitis B, two acute hepatitis E, four legionellosis and one enteroviruses infection with severe complications.

[3]The caseload of MDR-TB and tuberculosis were calculated based on CDC's registration date and notification date respectively.

[5]Calculation for tetanus and mumps were based on reported cases only.

[6]The caseload of syphilis and gonorrhea were estimated by the date of diagnosis.

[7]The caseload of HIV infection and AIDS were estimated based on diagnosis date, and the cases of foreign nationality were excluded.

[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.

Table 2 (Continued) Confirmed cases number and incidence[8] rate of notifiable diseases — by age group, 2010

Unit：Person

Disease	40-64 yrs		≥ 65 yrs		Age not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category II								
Rubella[1]	5	0.06	-	-	-	-	21	0.09
MDR-TB[3]	71	0.88	57	2.31	-	-	156	0.67
Chikungunya Fever[1]	2	0.02	-	-	-	-	13	0.06
West Nile Fever	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-
Category III								
Pertussis	6	0.07	-	-	-	-	61	0.26
Tetanus[5]	4	0.05	6	0.24	-	-	12	0.05
Japanese Encephalitis[1]	17	0.21	4	0.16	-	-	33	0.14
Tuberculosis[3]								
Smear-positive	1,773	22.04	2,569	103.89	-	-	5,027	21.72
Others	2,389	29.70	4,431	179.19	-	-	8,210	35.48
Congenital Rubella Syndrome	-	-	-	-	-	-	-	-
Acute Hepatitis								
B[1]	49	0.61	11	0.44	-	-	172	0.74
C	15	0.19	11	0.44	-	-	41	0.18
D	1	0.01	-	-	-	-	1	<0.01
E[1]	3	0.04	1	0.04	-	-	7	0.03
Unspecified	6	0.07	3	0.12	-	-	13	0.06
Mumps[5]	118	1.47	27	1.09	-	-	1,125	4.86
Legionellosis[1]	44	0.55	50	2.02	-	-	102	0.44
Invasive Haemophilus Influenzae Type b Infection	2	0.02	2	0.08	-	-	12	0.05
Syphilis[6]	2,337	29.06	1,391	56.25	-	-	6,482	28.01
Gonorrhea[6]	358	4.45	26	1.05	-	-	2,265	9.79
Neonatal Tetanus	-	-	-	-	-	-	-	-
Enteroviruses Infection with[1] Severe Complications	-	-	-	-	-	-	16	0.07
HIV Infection[7]	321	3.99	30	1.21	-	-	1,796	7.76
AIDS[7]	349	4.34	21	0.85	-	-	1,087	4.70

Note: [1]The case amount in 2010 contained imported ones, including 11 rubella, 13 chikungunya fever, one Japanese encephalitis, 10 acute hepatitis B, two acute hepatitis E, four legionellosis and one enteroviruses infection with severe complications.

[3]The caseload of MDR-TB and tuberculosis were calculated based on CDC's registration date and notification date respectively.

[5]Calculation for tetanus and mumps were based on reported cases only.

[6]The caseload of syphilis and gonorrhea were estimated based on diagnosis date.

[7]The caseload of HIV infection and AIDS were estimated based on diagnosis date, and the cases of foreign nationality were excluded.

[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.

Table 2 (Continued) Confirmed cases number and incidence[8] rate of notifiable diseases — by age group, 2010

Unit：Person

Disease	＜1 yr		1-4 yrs		5-14 yrs		15-24 yrs		25-39 yrs	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category III										
Hansen's Disease[4,6]	-	-	-	-	-	-	-	-	2	0.03
Category IV										
Herpesvirus B Infection	-	-	-	-	-	-	-	-	-	-
Leptospirosis[1]	-	-	-	-	-	-	8	0.25	21	0.37
Melioidosis	-	-	-	-	-	-	-	-	2	0.03
Botulism	-	-	-	-	-	-	2	0.06	2	0.03
Invasive Pneumococcal Disease	10	5.88	190	23.36	47	1.73	8	0.25	55	0.96
Q Fever[1]	-	-	-	-	-	-	3	0.09	22	0.38
Endemic Typhus Fever[1]	-	-	-	-	-	-	1	0.03	14	0.24
Lyme Disease	-	-	-	-	-	-	-	-	-	-
Tularemia	-	-	-	-	-	-	-	-	-	-
Scrub Typhus[1]	-	-	6	0.74	11	0.40	54	1.69	89	1.56
Varicella[5]	358	210.66	865	106.37	4,555	167.58	1,367	42.70	1,685	29.44
Cat-Scratch Disease	-	-	-	-	13	0.48	19	0.59	18	0.31
Toxoplasmosis	1	0.59	-	-	-	-	-	-	3	0.05
Severe Complicated Influenza Case[1]	4	2.35	37	4.55	77	2.83	69	2.16	114	1.99
Creutzfeldt-Jakob Disease[6,11]	-	-	-	-	-	-	-	-	-	-
NDM-1 Enterobacteriaceae[1,10]	-	-	-	-	-	-	-	-	-	-
Category V										
Rift Valley Fever	-	-	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including two leptospirosis, four Q fever, four endemic typhus fever, one scrub typhus, nine severe complicated influenza case and one NDM-1 enterobacteriaceae.
[4]The confirmed cases of Hansen's disease included two Taiwanese and three Indonesian.
[5]Calculation for varicella was based on reported cases only.
[6]The caseload of Hansen's disease and Creutzfeldt-Jakob disease were estimated based on diagnosis date.
[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.
[10]NDM-1 enterobacteriaceae has belonged to the list of Category IV Notifiable Disease since September 9, 2010.
[11]The first probable case of variant Creutzfeldt-Jakob disease (vCJD) in Taiwan who died in 2010 was adopted in 2010's CJD surveillance data and was categorized as an imported case due to resided in UK for 8 years (1989-1997) with exposedness across the prevalent period of bovine spongiform encephalopathy (BSE).

Table 2 (Continued) Confirmed cases number and incidence[8] rate of notifiable diseases — by age group, 2010

Unit：Person

Disease	40-64 yrs		≥ 65 yrs		Age not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category III								
Hansen's Disease[4,6]	2	0.02	1	0.04	-	-	5	0.02
Category IV								
Herpesvirus B Infection	-	-	-	-	-	-	-	-
Leptospirosis[1]	40	0.50	8	0.32	-	-	77	0.33
Melioidosis	31	0.39	12	0.49	-	-	45	0.19
Botulism	5	0.06	2	0.08	-	-	11	0.05
Invasive Pneumococcal Disease	187	2.33	240	9.71	-	-	737	3.18
Q Fever[1]	51	0.63	13	0.53	-	-	89	0.38
Endemic Typhus Fever[1]	25	0.31	2	0.08	-	-	42	0.18
Lyme Disease	-	-	-	-	-	-	-	-
Tularemia	-	-	-	-	-	-	-	-
Scrub Typhus[1]	196	2.44	46	1.86	-	-	402	1.74
Varicella[5]	354	4.40	34	1.37	-	-	9,218	39.83
Cat-Scratch Disease	15	0.19	-	-	-	-	65	0.28
Toxoplasmosis	1	0.01	-	-	-	-	5	0.02
Severe Complicated Influenza Case[1]	208	2.59	373	15.08	-	-	882	3.81
Creutzfeldt-Jakob Disease[6,11]	-	-	-	-	-	-	-	-
NDM-1 Enterobacteriaceae[1,10]	1	0.01	-	-	-	-	1	<0.01
Category V								
Rift Valley Fever	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including two leptospirosis, four Q fever, four endemic typhus fever, one scrub typhus, nine severe complicated influenza case and one NDM-1 enterobacteriaceae.
[4]The confirmed cases of Hansen's disease included two Taiwanese and three Indonesian.
[5]Calculation for varicella was based on reported cases only.
[6]The caseload of Hansen's disease and Creutzfeldt-Jakob disease were estimated based on diagnosis date.
[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.
[10]NDM-1 enterobacteriaceae has belonged to the list of Category IV Notifiable Disease since September 9, 2010.
[11]The first probable case of variant Creutzfeldt-Jakob disease (vCJD) in Taiwan who died in 2010 was adopted in 2010's CJD surveillance data and was categorized as an imported case due to resided in UK for 8 years (1989- 1997) with exposedness across the prevalent period of bovine spongiform encephalopathy (BSE).

Table 3 Confirmed cases number of notifiable diseases — by month, 2010

Unit：Person

Disease	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Category I													
Smallpox	-	-	-	-	-	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-	-	-	-
SARS	-	-	-	-	-	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-	-	-	-	-
H5N1 Influenza	-	-	-	-	-	-	-	-	-	-	-	-	-
Category II													
Diphtheria	-	-	-	-	-	-	-	-	-	-	-	-	-
Typhoid Fever[1]	6	5	4	4	3	1	2	1	2	1	3	1	33
Dengue Fever[1]	42	23	18	10	12	23	37	148	401	601	397	184	1,896
Dengue Hemorrhagic Fever /[1] Dengue Shock Syndrome	-	1	1	-	-	-	-	1	4	8	4	2	21
Meningococcal Meningitis	1	-	-	1	-	1	2	-	-	1	1	-	7
Paratyphoid Fever[1]	-	1	-	-	-	8	1	-	1	-	-	1	12
Poliomyelitis	-	-	-	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	2	3	7	6	5	9	2	1	4	5	2	3	49
Shigellosis[1]	23	14	7	3	6	7	13	7	29	21	30	12	172
Amoebiasis[1]	26	19	25	23	14	16	24	19	25	25	25	21	262
Malaria[1]													
Indigenous	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported	1	2	1	1	2	2	2	1	5	2	2	-	21
Measles[1]	-	1	2	2	2	4	1	-	-	-	-	-	12
Acute Hepatitis A[1]	33	13	7	3	3	10	5	8	7	8	8	5	110
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome													
Hemorrhagic Fever with Renal Syndrome	-	-	1	-	-	-	-	-	-	-	-	-	1
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera	-	-	-	-	-	1	-	1	2	1	-	-	5

Note: [1]The case amount in 2010 contained imported cases, including 11 typhoid fever, 304 dengue fever, three dengue hemorrhagic fever /dengue shock syndrome,12 paratyphoid fever, 82 shigellosis,139 amoebiasis, 21 malaria, six measles and 15 acute hepatitis A.

[2]Acute flaccid paralysis cases above 15 years old had been excluded since 2005.

Table 3 (Continued) Confirmed cases number of notifiable diseases — by month, 2010

Unit：Person

Disease	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Category II													
Rubella[1]	-	-	1	5	3	3	4	-	1	1	1	2	21
MDR-TB[3]	13	10	21	14	10	12	14	18	11	10	13	10	156
Chikungunya Fever[1]	-	4	2	-	2	2	-	1	-	1	1	-	13
West Nile Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Category III													
Pertussis	-	6	12	11	8	3	6	5	2	1	2	5	61
Tetanus[5]	1	1	-	1	1	3	1	1	1	1	-	1	12
Japanese Encephalitis[1]	-	-	-	-	2	14	13	2	1	-	1	-	33
Tuberculosis[3]													
Smear-positive	391	338	465	412	455	448	466	449	445	394	402	362	5,027
Others	642	574	678	715	738	718	676	685	671	705	746	662	8,210
Congenital Rubella Syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-
Acute Hepatitis													
B[1]	12	11	15	12	22	13	20	17	5	17	20	8	172
C	3	5	2	3	1	4	6	3	2	2	3	7	41
D	1	-	-	-	-	-	-	-	-	-	-	-	1
E[1]	1	-	-	1	-	1	3	1	-	-	-	-	7
Unspecified	1	-	1	1	2	1	1	2	2	-	2	-	13
Mumps[5]	86	59	82	102	129	129	95	104	85	107	74	73	1,125
Legionellosis[1]	6	7	11	3	3	7	8	12	13	13	11	8	102
Invasive Haemophilus Influenzae Type b Infection	-	-	2	3	-	1	1	-	2	-	-	3	12
Syphilis[6]	493	368	651	605	559	547	599	580	502	529	552	497	6,482
Gonorrhea[6]	193	191	227	182	183	149	186	195	158	172	217	212	2,265
Neonatal Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-
Enteroviruses Infection with[1] Severe Complications	-	1	2	4	3	4	1	-	1	-	-	-	16
HIV Infection[7]	133	108	163	159	148	163	146	136	149	165	170	156	1,796
AIDS[7]	86	77	98	93	94	90	84	96	96	82	89	102	1,087

Note: [1]The case amount in 2010 contained imported cases, including 11 rubella,13 chikungunya fever, one Japanese encephalitis, 10 acute hepatitis B, two acute hepatitis E, four legionellosis and one enteroviruses infection with severe complications.

[3]The caseload of MDR-TB and tuberculosis were calculated based on CDC's registration date and notification date respectively.

[5]Calculation for tetanus and mumps were based on reported cases only.

[6]The caseload of syphilis and gonorrhea were estimated based on diagnosis date.

[7]The caseload of HIV infection and AIDS were estimated based on diagnosis date, and the cases of foreign nationality were excluded.

Table 3 (Continued) Confirmed cases number of notifiable diseases — by month, 2010

Unit：Person

Disease	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Category III													
Hansen's Disease[4,6]	-	-	1	1	-	-	-	-	-	1	1	1	5
Category IV													
Herpesvirus B Infection	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis[1]	4	5	2	6	4	6	8	4	12	9	12	5	77
Melioidosis	1	2	2	2	3	2	1	5	11	8	6	2	45
Botulism	-	-	3	2	4	2	-	-	-	-	-	-	11
Invasive Pneumococcal Disease	83	65	79	74	61	44	49	37	39	62	58	86	737
Q Fever[1]	8	14	9	9	14	14	4	6	5	2	1	3	89
Endemic Typhus Fever[1]	2	-	6	1	9	3	8	4	4	2	2	1	42
Lyme Disease	-	-	-	-	-	-	-	-	-	-	-	-	-
Tularemia	-	-	-	-	-	-	-	-	-	-	-	-	-
Scrub Typhus[1]	45	14	8	23	25	33	63	27	27	60	37	40	402
Varicella[5]	886	710	716	909	1,031	700	638	640	666	624	810	888	9,218
Cat-Scratch Disease	4	3	-	3	4	10	10	10	10	3	5	3	65
Toxoplasmosis	-	2	-	-	1	-	-	-	-	1	-	1	5
Severe Complicated Influenza Case[1]	44	13	10	14	57	59	122	238	157	73	36	59	882
Creutzfeldt-Jakob Disease[6,11]	-	-	-	-	-	-	-	-	-	-	-	-	-
NDM-1 Enterobacteriaceae[1,10]	-	-	-	-	-	-	-	-	-	1	-	-	1
Category V													
Rift Valley Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including two leptospirosis, four Q fever, four endemic typhus fever, one scrub typhus, nine severe complicated influenza case and one NDM-1 enterobacteriaceae.
[4]The confirmed cases of Hansen's disease included two Taiwanese and three Indonesian.
[5]Calculation for varicella was based on reported cases only.
[6]The caseload of Hansen's disease and Creutzfeldt-Jakob disease were estimated based on diagnosis date.
[10]NDM-1 enterobacteriaceae has belonged to the list of Category IV Notifiable Disease since September 9, 2010.
[11]The first probable case of variant Creutzfeldt-Jakob disease (vCJD) in Taiwan who died in 2010 was adopted in 2010's CJD surveillance data and was categorized as an imported case due to resided in UK for 8 years (1989-1997) with exposedness across the prevalent period of bovine spongiform encephalopathy (BSE).

Table 4 Confirmed cases number and incidence[8] rate of notifiable diseases — by sex, 2010

Unit：Person

Disease	Female		Male		Sex not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category I								
Smallpox	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-
SARS	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-
H5N1 Influenza	-	-	-	-	-	-	-	-
Category II								
Diphtheria	-	-	-	-	-	-	-	-
Typhoid Fever[1]	16	0.14	17	0.15	-	-	33	0.14
Dengue Fever[1]	963	8.37	933	8.02	-	-	1,896	8.19
Dengue Hemorrhagic Fever/[1] Dengue Shock Syndrome	10	0.09	11	0.09	-	-	21	0.09
Meningococcal Meningitis	2	0.02	5	0.04	-	-	7	0.03
Paratyphoid Fever[1]	12	0.10	-	-	-	-	12	0.05
Poliomyelitis	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	19	0.17	30	0.26	-	-	49	0.21
Shigellosis[1]	83	0.72	89	0.76	-	-	172	0.74
Amoebiasis[1]	125	1.09	137	1.18	-	-	262	1.13
Malaria[1]								
Indigenous	-	-	-	-	-	-	-	-
Imported	3	0.03	18	0.15	-	-	21	0.09
Measles[1]	7	0.06	5	0.04	-	-	12	0.05
Acute Hepatitis A[1]	48	0.42	62	0.53	-	-	110	0.48
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-
Hantavirus Syndrome								
Hemorrhagic Fever with Renal Syndrome	-	-	1	0.01	-	-	1	<0.01
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-
Cholera	2	0.02	3	0.03	-	-	5	0.02

Note:[1]The case amount in 2010 contained imported cases, including 11 typhoid fever, 304 dengue fever, three dengue hemorrhagic fever /dengue shock syndrome, 12 paratyphoid fever, 82 shigellosis, 139 amoebiasis, 21 malaria, six measles and 15 acute hepatitis A.

[2]Acute flaccid paralysis cases above 15 years old had been excluded since 2005.

[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.

Table 4 (Continued) Confirmed cases number and incidence[8] rate of notifiable diseases — by sex, 2010

Unit：Person

Disease	Female		Male		Sex not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category II								
Rubella[1]	9	0.08	12	0.10	-	-	21	0.09
MDR-TB[3]	44	0.38	112	0.96	-	-	156	0.67
Chikungunya Fever[1]	6	0.05	7	0.06	-	-	13	0.06
West Nile Fever	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-
Category III								
Pertussis	27	0.23	34	0.29	-	-	61	0.26
Tetanus[5]	7	0.06	5	0.04	-	-	12	0.05
Japanese Encephalitis[1]	11	0.10	22	0.19	-	-	33	0.14
Tuberculosis[3]								
Smear-positive	1,386	12.05	3,641	31.29	-	-	5,027	21.72
Others	2,720	23.64	5,490	47.18	-	-	8,210	35.48
Congenital Rubella Syndrome	-	-	-	-	-	-	-	-
Acute Hepatitis								
B[1]	73	0.63	99	0.85	-	-	172	0.74
C	19	0.17	22	0.19	-	-	41	0.18
D	-	-	1	0.01	-	-	1	<0.01
E[1]	4	0.03	3	0.03	-	-	7	0.03
Unspecified	5	0.04	8	0.07	-	-	13	0.06
Mumps[5]	435	3.78	690	5.93	-	-	1,125	4.86
Legionellosis[1]	17	0.15	85	0.73	-	-	102	0.44
Invasive Haemophilus Influenzae Type b Infection	5	0.04	7	0.06	-	-	12	0.05
Syphilis[6]	1,888	16.41	4,594	39.48	-	-	6,482	28.01
Gonorrhea[6]	185	1.61	2,080	17.88	-	-	2,265	9.79
Neonatal Tetanus	-	-	-	-	-	-	-	-
Enteroviruses Infection with[1] Severe Complications	8	0.07	8	0.07	-	-	16	0.07
HIV Infection[7]	66	0.57	1,730	14.87	-	-	1,796	7.76
AIDS[7]	71	0.62	1,016	8.73	-	-	1,087	4.70

Note: [1]The case amount in 2010 contained imported cases, including 11 rubella,13 chikungunya fever, one Japanese encephalitis, 10 acute hepatitis B, two acute hepatitis E, four legionellosis and one enteroviruses infection with severe complications.

[3]The caseload of MDR-TB and tuberculosis were calculated based on CDC's registration date and notification date respectively.

[5]Calculation for tetanus and mumps were based on reported cases only.

[6]The caseload of syphilis and gonorrhea were estimated based on diagnosis date.

[7]The caseload of HIV infection and AIDS were estimated based on diagnosis date, and the cases of foreign nationality were excluded.

[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.

Table 4 (Continued) Confirmed cases number and incidence[8] rate of notifiable diseases — by sex, 2010

Unit：Person

Disease	Female		Male		Sex not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category III								
Hansen's Disease[4,6]	3	0.03	2	0.02	-	-	5	0.02
Category IV								
Herpesvirus B Infection	-	-	-	-	-	-	-	-
Leptospirosis[1]	13	0.11	64	0.55	-	-	77	0.33
Melioidosis	11	0.10	34	0.29	-	-	45	0.19
Botulism	6	0.05	5	0.04	-	-	11	0.05
Invasive Pneumococcal Disease	244	2.12	493	4.24	-	-	737	3.18
Q Fever[1]	5	0.04	84	0.72	-	-	89	0.38
Endemic Typhus Fever[1]	11	0.10	31	0.27	-	-	42	0.18
Lyme Disease	-	-	-	-	-	-	-	-
Tularemia	-	-	-	-	-	-	-	-
Scrub Typhus[1]	161	1.40	241	2.07	-	-	402	1.74
Varicella[5]	4,166	36.21	5,052	43.42	-	-	9,218	39.83
Cat-Scratch Disease	28	0.24	37	0.32	-	-	65	0.28
Toxoplasmosis	3	0.03	2	0.02	-	-	5	0.02
Severe Complicated Influenza Case[1]	383	3.33	499	4.29	-	-	882	3.81
Creutzfeldt-Jakob Disease[6,11]	-	-	-	-	-	-	-	-
NDM-1 Enterobacteriaceae[1,10]	-	-	1	0.01	-	-	1	<0.01
Category V								
Rift Valley Fever	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including two leptospirosis, four Q fever, four endemic typhus fever, one scrub typhus, nine severe complicated influenza case and one NDM-1 enterobacteriaceae.
[4]The confirmed cases of Hansen's disease included two Taiwanese and three Indonesian.
[5]Calculation for varicella was based on reported cases only.
[6]The caseload of Hansen's disease and Creutzfeldt-Jakob disease were estimated based on diagnosis date.
[8]Incidence rate indicates the number of new confirmed cases per 100,000 population.
[10] NDM-1 enterobacteriaceae has belonged to the list of Category IV Notifiable Disease since September 9, 2010.
[11]The first probable case of variant Creutzfeldt-Jakob disease (vCJD) in Taiwan who died in 2010 was adopted in 2010's CJD surveillance data and was categorized as an imported case due to resided in UK for 8 years (1989-1997) with exposedness across the prevalent period of bovine spongiform encephalopathy (BSE).

Table 5 Confirmed cases number of notifiable diseases — by year, 2001-2010

Unit：Person

Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Category I										
Smallpox	…	…	…	…	…	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-
SARS	…	…	347	-	-	-	-	-	-	-
Rabies	-	1	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-	-
H5N1 Influenza	…	…	…	…	-	-	-	-	-	-
Category II										
Diphtheria	-	-	-	-	-	-	-	-	-	-
Typhoid Fever[1]	59	54	40	38	35	43	34	33	80	33
Dengue Fever[1]	270	5,388	145	427	306	1,074	2,179	714	1,052	1,896
Dengue Hemorrhagic Fever/[1] Dengue Shock Syndrome	11	242	2	7	5	19	12	5	11	21
Meningococcal Meningitis	43	46	26	24	20	13	20	19	2	7
Paratyphoid Fever[1]	11	18	15	19	13	10	6	11	6	12
Poliomyelitis	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	101	84	65	56	61	66	51	74	45	49
Shigellosis[1]	1,327	436	246	156	174	139	246	90	91	172
Amoebiasis[1]	303	289	121	96	120	125	145	227	190	262
Malaria[1]										
Indigenous	-	-	-	-	-	-	-	-	-	-
Imported	29	28	34	18	26	26	13	18	11	21
Measles[1]	9*	24	6	-	7	4	10	16	48	12
Acute Hepatitis A[1]	257	212	160	204	257	189	203	236	234	110
Enterohaemorrhagic *E. coli* Infection	1	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome										
Hemorrhagic Fever with Renal Syndrome	1*	-	-	3	-	3	1	1	-	1
Hantavirus Pulmonary Syndrome	3*	-	-	-	-	-	-	-	-	-
Cholera	-	2	1	1	2	1	-	1	3	5

Note: [1]The case amount in 2010 contained imported cases, including 11 typhoid fever, 304 dengue fever, three dengue hemorrhagic fever /dengue shock syndrome,12 paratyphoid fever, 82 shigellosis, 139 amoebiasis, 21 malaria, six measles and 15 acute hepatitis A.

[2]Acute flaccid paralysis cases above 15 years old had been excluded since 2005.

*The collative case numbers see the appendix 1.

Table 5 (Continued) Confirmed cases number of notifiable diseases — by year, 2001-2010

Unit：Person

Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Category II										
Rubella[1]	17	4	2	4	7	6	54	33	23	21
MDR-TB[3,9]	…	…	…	…	…	…	19	159	176	156
Chikungunya Fever[1,9]	…	…	…	…	…	…	2	9	9	13
West Nile Fever	…	…	…	…	…	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-
Category III										
Pertussis	6	18	26	21	38	14	41	41	90	61
Tetanus[5]	19	15	13	16	16	14	10	18	12	12
Japanese Encephalitis[1]	33	19	25	32	35	29	37	17	18	33
Tuberculosis[3]										
Smear-positive	4,512	5,928	5,203	5,784	5,748	5,542	5,734	5,559	5,210	5,027
Others	9,974	10,830	9,839	11,000	10,724	9,836	8,746	8,706	8,126	8,210
Congenital Rubella Syndrome	3	-	-	-	-	-	1	1	-	-
Acute Hepatitis										
B[1]	355	417	326*	378	321	245	202	231	152	172
C	152	156	167	195	172	154	153	124	131	41
D	4	9	11	12	4	5	1	4	1	1
E[1]	1	12	10*	18	21	11	12	14	9	7
Unspecified	-	-	-	-	10	9	10	22	18	13
Mumps[5]	444	664*	676	1,081	1,158	971	1,208	1,145	1,068	1,125
Legionellosis[1]	40	72	109	106	38	56	56	69	84	102
Invasive Haemophilus Influenzae Type b Infection	49	41	22	20	12	16	16	12	14	12
Syphilis[6]	4,256	4,182	3,947	5,209	5,305	5,808	5,798	6,526	6,668	6,482
Gonorrhea[6]	443	838	1,626	1,978	1,515	1,437	1,442	1,621	2,137	2,265
Neonatal Tetanus[9]	…	…	…	…	…	…	-	-	-	-
Enteroviruses Infection with Severe Complications[1]	393	162	70	50	142	11	12	373	29	16
HIV Infection[7]	689	773*	857*	1,521*	3,403	2,938	1,935	1,752	1,648	1,796
AIDS[7]	165*	177*	225*	257*	506	579	1,061	849	930	1,087

Note: [1]The case amount in 2010 contained imported cases, including 11 rubella,13 chikungunya fever, one Japanese encephalitis, 10 acute hepatitis B, two acute hepatitis E, four legionellosis and one enteroviruses infection with severe complications.

[3]The caseload of MDR-TB and tuberculosis were calculated based on CDC's registration date and notification date respectively.

[5]Calculation for tetanus and mumps were based on reported cases only.

[6]The caseload of syphilis and gonorrhea were estimated based on diagnosis date.

[7]The caseload of HIV infection and AIDS were estimated based on diagnosis date, and the cases of foreign nationality were excluded.

[9]The statistics of MDR-TB, chikungunya fever and neonatal tetanus were conducted with the proclamation validated since October 15, 2007.

*The collative case numbers see the appendix 1.

Table 5 (Continued) Confirmed cases number of notifiable diseases — by year, 2001-2010

Unit：Person

Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Category III										
Hansen's Disease[4,6]	2	7*	2*	5*	9	11	12	8	7	5
Category IV										
Herpesvirus B Infection[9]	…	…	…	…	…	…	-	-	-	-
Leptospirosis[1,9]	…	…	…	…	…	…	10	47	203	77
Melioidosis[9]	…	…	…	…	…	…	4	45	44	45
Botulism[9]	…	…	…	…	…	…	4	11	1	11
Invasive Pneumococcal Disease[9]	…	…	…	…	…	…	169	805	690	737
Q Fever[1,9]	…	…	…	…	…	…	17	91	89	89
Endemic Typhus Fever[1,9]	…	…	…	…	…	…	6	31	40	42
Lyme Disease[9]	…	…	…	…	…	…	1	2	-	-
Tularemia[9]	…	…	…	…	…	…	-	-	-	-
Scrub Typhus[1]	235	237	271	368	462	384	510	492	353	402
Varicella[5]	5,316	13,070*	12,270*	13,219	13,600	10,563	11,110	11,877	10,931	9,218
Cat-Scratch Disease[9]	…	…	…	…	…	…	1	28	26	65
Toxoplasmosis[9]	…	…	…	…	…	…	2	3	7	5
Severe Complicated Influenza Case[1]	7	5	16	19	33	25	26	22	1,134	882
Creutzfeldt-Jakob Disease[6,9,11]	…	…	…	…	…	…	-	-	3	-
NDM-1 Enterobacteriaceae[1,10]	…	…	…	…	…	…	…	…	…	1
Category V										
Rift Valley Fever	…	…	…	…	…	-	-	-	-	-
Marburg Haemorrhagic Fever	…	…	…	…	…	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
Lassa Fever	…	…	…	…	…	-	-	-	-	-

Note: [1]The case amount in 2010 contained imported cases, including two leptospirosis, four Q fever, four endemic typhus fever, one scrub typhus, nine severe complicated influenza case and one NDM-1 enterobacteriaceae.

[4]The confirmed cases of Hansen's disease included two Taiwanese and three Indonesian.

[5]Calculation for varicella was based on reported cases only.

[6]The caseload of Hansen's disease and Creutzfeldt-Jakob disease were estimated based on diagnosis date.

[9]The statistics of herpesvirus B infection, leptospirosis, melioidosis, botulism, invasive pneumococcal disease,Q fever, endemic typhus fever, lyme disease, tularemia, cat-scratch disease, toxoplasmosis and Creutzfeldt-Jakob disease were conducted with the proclamation validated since October 15, 2007.

[10] NDM-1 enterobacteriaceae has belonged to the list of Category IV Notifiable Disease since September 9, 2010.

[11]The first probable case of variant Creutzfeldt-Jakob disease (vCJD) in Taiwan who died in 2010 was adopted in 2010's CJD surveillance data and was categorized as an imported case due to resided in UK for 8 years (1989- 1997) with exposedness across the prevalent period of bovine spongiform encephalopathy (BSE).

*The collative case numbers see the appendix 1.

Table 6 Analysis of time intervals between diagnosis and reporting for notifiable diseases — by locality, 2010

Unit：Day

Locality	2009			2010						
	Case no.	Average	Median	Case no.	Average	Median	<=24 hours		>24 hours	
							Case no.	%	Case no.	%
Total	6,572	0.3	0	7,917	0.3	0	7,859	99.3	58	0.7
Taipei City	1,254	0.3	0	912	0.4	0	909	99.7	3	0.3
Kaohsiung City	1,359	0.3	0	2,449	0.3	0	2,447	99.9	2	0.1
Taipei County	502	0.2	0	575	0.2	0	575	100.0	-	-
Yilan County	74	0.3	0	52	0.2	0	51	98.1	1	1.9
Taoyuan County	661	0.4	0	521	0.4	0	471	90.4	50	9.6
Hsinchu County	34	0.3	0	17	0.2	0	17	100.0	-	-
Miaoli County	47	0.1	0	67	0.2	0	67	100.0	-	-
Taichung County	169	0.3	0	210	0.4	0	210	100.0	-	-
Changhua County	233	0.1	0	243	0.1	0	243	100.0	-	-
Nantou County	44	0.4	0	31	0.1	0	31	100.0	-	-
Yunlin County	47	0.1	0	58	0.1	0	58	100.0	-	-
Chiayi County	36	0.1	0	32	0.0	0	32	100.0	-	-
Tainan County	105	0.1	0	261	0.2	0	261	100.0	-	-
Kaohsiung County	403	0.3	0	469	0.4	0	468	99.8	1	0.2
Pingtung County	467	0.2	0	253	0.3	0	253	100.0	-	-
Taitung County	24	0.3	0	56	0.3	0	56	100.0	-	-
Hualien County	170	0.2	0	278	0.2	0	278	100.0	-	-
Penghu County	11	0.4	0	20	0.3	0	20	100.0	-	-
Keelung City	41	0.1	0	39	0.1	0	39	100.0	-	-
Hsinchu City	160	0.1	0	85	0.1	0	85	100.0	-	-
Taichung City	341	0.2	0	287	0.4	0	286	99.7	1	0.3
Chiayi City	50	0.1	0	48	0.1	0	48	100.0	-	-
Tainan City	317	0.2	0	944	0.3	0	944	100.0	-	-
Kinmen County	17	0.3	0	10	0.7	0	10	100.0	-	-
Lienchiang County	6	0.0	0	-	-	-	-	-	-	-

Note: 1. Listed infectious diseases should be reported within 24 hours, which was not included MDR-TB, HIV and AIDS.

2. Analysis of time interval "between diagnosis and report received" has been separated into "between diagnosis and reporting" and "between reporting and report received" since 2003.

Table 7 Analysis of time intervals between reporting and reports received for notifiable diseases — by locality, 2010

Unit：Day

Locality	2009			2010						
	Case no.	Average	Median	Case no.	Average	Median	<=24 hours		>24 hours	
							Case no.	%	Case no.	%
Total	6,572	0.0	0	7,917	0.0	0	7,917	100.0	-	-
Taipei City	1,254	0.0	0	912	0.0	0	912	100.0	-	-
Kaohsiung City	1,359	0.0	0	2,449	0.0	0	2,449	100.0	-	-
Taipei County	502	0.0	0	575	0.0	0	575	100.0	-	-
Yilan County	74	0.0	0	52	0.0	0	52	100.0	-	-
Taoyuan County	661	0.0	0	521	0.0	0	521	100.0	-	-
Hsinchu County	34	0.0	0	17	0.0	0	17	100.0	-	-
Miaoli County	47	0.0	0	67	0.0	0	67	100.0	-	-
Taichung County	169	0.0	0	210	0.0	0	210	100.0	-	-
Changhua County	233	0.0	0	243	0.0	0	243	100.0	-	-
Nantou County	44	0.0	0	31	0.0	0	31	100.0	-	-
Yunlin County	47	0.0	0	58	0.0	0	58	100.0	-	-
Chiayi County	36	0.0	0	32	0.0	0	32	100.0	-	-
Tainan County	105	0.0	0	261	0.0	0	261	100.0	-	-
Kaohsiung County	403	0.0	0	469	0.0	0	469	100.0	-	-
Pingtung County	467	0.0	0	253	0.0	0	253	100.0	-	-
Taitung County	24	0.0	0	56	0.0	0	56	100.0	-	-
Hualien County	170	0.0	0	278	0.0	0	278	100.0	-	-
Penghu County	11	0.1	0	20	0.0	0	20	100.0	-	-
Keelung City	41	0.0	0	39	0.0	0	39	100.0	-	-
Hsinchu City	160	0.0	0	85	0.0	0	85	100.0	-	-
Taichung City	341	0.0	0	287	0.0	0	287	100.0	-	-
Chiayi City	50	0.0	0	48	0.0	0	48	100.0	-	-
Tainan City	317	0.0	0	944	0.0	0	944	100.0	-	-
Kinmen County	17	0.1	0	10	0.4	0	10	100.0	-	-
Lienchiang County	6	0.0	0	-	-	-	-	-	-	-

Note: 1. Listed infectious diseases should be reported within 24 hours, which was not included MDR-TB, HIV and AIDS.

2. Analysis of time interval "between diagnosis and report received" has been separated into "between diagnosis and reporting" and "between reporting and report received" since 2003.

Table 8 Analysis of time intervals between reports received from local health bureau to Taiwan CDC for notifiable diseases — by locality, 2010

Unit：Day

Locality	2009			2010						
	Case no.	Average	Median	Case no.	Average	Median	<=24 hours		>24 hours	
							Case no.	%	Case no.	%
Total	6,572	0.0	0	7,917	0.0	0	7,916	>99.9	1	<0.1
Taipei City	1,254	0.0	0	912	0.0	0	912	100.0	-	-
Kaohsiung City	1,359	0.0	0	2,449	0.0	0	2,449	100.0	-	-
Taipei County	502	0.0	0	575	0.0	0	575	100.0	-	-
Yilan County	74	0.0	0	52	0.0	0	52	100.0	-	-
Taoyuan County	661	0.0	0	521	0.0	0	521	100.0	-	-
Hsinchu County	34	0.0	0	17	0.0	0	17	100.0	-	-
Miaoli County	47	0.0	0	67	0.0	0	67	100.0	-	-
Taichung County	169	0.0	0	210	0.0	0	210	100.0	-	-
Changhua County	233	0.0	0	243	0.0	0	243	100.0	-	-
Nantou County	44	0.0	0	31	0.0	0	31	100.0	-	-
Yunlin County	47	0.0	0	58	0.0	0	58	100.0	-	-
Chiayi County	36	0.0	0	32	0.0	0	32	100.0	-	-
Tainan County	105	0.0	0	261	0.0	0	261	100.0	-	-
Kaohsiung County	403	0.0	0	469	0.0	0	469	100.0	-	-
Pingtung County	467	0.0	0	253	0.0	0	253	100.0	-	-
Taitung County	24	0.0	0	56	0.0	0	56	100.0	-	-
Hualien County	170	0.0	0	278	0.0	0	278	100.0	-	-
Penghu County	11	0.0	0	20	0.0	0	20	100.0	-	-
Keelung City	41	0.0	0	39	0.0	0	39	100.0	-	-
Hsinchu City	160	0.0	0	85	0.0	0	85	100.0	-	-
Taichung City	341	0.0	0	287	0.0	0	287	100.0	-	-
Chiayi City	50	0.0	0	48	0.0	0	47	97.9	1	2.1
Tainan City	317	0.0	0	944	0.0	0	944	100.0	-	-
Kinmen County	17	0.0	0	10	0.0	0	10	100.0	-	-
Lienchiang County	6	0.0	0	-	-	-	-	-	-	-

Note: Listed infectious diseases should be reported within 24 hours, which was not included MDR-TB, HIV and AIDS.

Table 9 Cases of Acute Flaccid Paralysis, Neonatal Tetanus, Congenital Rubella Syndrome, and Measles Eradication Program — by Locality, 2010

Unit：Person

Locality	Total					Acute flaccid paralysis					Neonatal tetanus				
	(1)	(2)	(3)	(3-1)	(4)	(1)	(2)	(3)	(3-1)	(4)	(1)	(2)	(3)	(3-1)	(4)
Total	199	273	216	79.1	82	48	50	37	74.0	49	11	-	-	-	-
Taipei City	25	59	55	93.2	23	1	5	5	100.0	5	-	-	-	-	-
Kaohsiung City	35	30	14	46.7	15	17	12	5	41.7	12	-	-	-	-	-
Taipei County	7	37	35	94.6	4	2	1	1	100.0	1	-	-	-	-	-
Yilan County	-	4	3	75.0	-	-	1	1	100.0	-	-	-	-	-	-
Taoyuan County	8	31	12	38.7	10	2	8	4	50.0	8	-	-	-	-	-
Hsinchu County	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miaoli County	-	5	5	100.0	-	-	-	-	-	-	-	-	-	-	-
Taichung County	10	6	6	100.0	-	3	-	-	-	-	-	-	-	-	-
Changhua County	5	5	5	100.0	2	2	2	2	100.0	2	-	-	-	-	-
Nantou County	-	5	5	100.0	-	-	-	-	-	-	-	-	-	-	-
Yunlin County	2	3	2	66.7	1	-	1	1	100.0	1	-	-	-	-	-
Chiayi County	2	2	1	50.0	-	-	-	-	-	-	-	-	-	-	-
Tainan County	12	11	11	100.0	1	1	1	1	100.0	1	-	-	-	-	-
Kaohsiung County	12	15	9	60.0	3	1	3	2	66.7	3	-	-	-	-	-
Pingtung County	13	11	6	54.5	3	5	3	2	66.7	3	-	-	-	-	-
Taitung County	57	4	3	75.0	2	11	-	-	-	-	11	-	-	-	-
Hualien County	4	4	4	100.0	1	1	1	1	100.0	1	-	-	-	-	-
Penghu County	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Keelung City	-	3	3	100.0	-	-	-	-	-	-	-	-	-	-	-
Hsinchu City	4	13	13	100.0	3	-	-	-	-	-	-	-	-	-	-
Taichung City	2	12	12	100.0	8	2	6	6	100.0	6	-	-	-	-	-
Chiayi City	-	4	4	100.0	3	-	3	3	100.0	3	-	-	-	-	-
Tainan City	1	8	7	87.5	3	-	3	3	100.0	3	-	-	-	-	-
Kinmen County	-	1	1	100.0	-	-	-	-	-	-	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: 1. (1) Cases from active surveillance
(2) Cases from passive surveillance
(3) Investigated cases
(3-1) Percentage of cases investigated
(4) Confirmed Cases (AFP cases were confirmed by neurologists, others by lab and clinical symptoms.)
2. Analysis unit: reporting jurisdictions.
3. Acute flaccid paralysis cases above 15 years old were excluded since 2005.

Table 9 (Continued) Cases of Acute Flaccid Paralysis, Neonatal Tetanus, Congenital Rubella Syndrome, and Measles Eradication Program — by Locality, 2010

Unit：Person

Locality	Congenital rubella syndrome					Measles					Rubella				
	(1)	(2)	(3)	(3-1)	(4)	(1)	(2)	(3)	(3-1)	(4)	(1)	(2)	(3)	(3-1)	(4)
Total	11	3	2	66.7	-	84	148	119	80.4	12	45	72	58	80.6	21
Taipei City	-	1	1	100.0	-	16	30	28	93.3	6	8	23	21	91.3	12
Kaohsiung City	-	-	-	-	-	13	12	6	50.0	2	5	6	3	50.0	1
Taipei County	-	2	1	50.0	-	4	25	24	96.0	1	1	9	9	100.0	2
Yilan County	-	-	-	-	-	-	3	2	66.7	-	-	-	-	-	-
Taoyuan County	-	-	-	-	-	4	17	6	35.3	-	2	6	2	33.3	2
Hsinchu County	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miaoli County	-	-	-	-	-	-	4	4	100.0	-	-	1	1	100.0	-
Taichung County	-	-	-	-	-	3	1	1	100.0	-	4	5	5	100.0	-
Changhua County	-	-	-	-	-	3	3	3	100.0	-	-	-	-	-	-
Nantou County	-	-	-	-	-	-	2	2	100.0	-	-	3	3	100.0	-
Yunlin County	-	-	-	-	-	1	1	1	100.0	-	1	1	-	0.0	-
Chiayi County	-	-	-	-	-	2	2	1	50.0	-	-	-	-	-	-
Tainan County	-	-	-	-	-	8	8	8	100.0	-	3	2	2	100.0	-
Kaohsiung County	-	-	-	-	-	6	7	4	57.1	-	5	5	3	60.0	-
Pingtung County	-	-	-	-	-	5	5	2	40.0	-	3	3	2	66.7	-
Taitung County	11	-	-	-	-	13	2	2	100.0	-	11	2	1	50.0	2
Hualien County	-	-	-	-	-	3	3	3	100.0	-	-	-	-	-	-
Penghu County	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Keelung City	-	-	-	-	-	-	2	2	100.0	-	-	1	1	100.0	-
Hsinchu City	-	-	-	-	-	2	10	10	100.0	1	2	3	3	100.0	2
Taichung City	-	-	-	-	-	-	5	5	100.0	2	-	1	1	100.0	-
Chiayi City	-	-	-	-	-	-	-	-	-	-	-	1	1	100.0	-
Tainan City	-	-	-	-	-	1	5	4	80.0	-	-	-	-	-	-
Kinmen County	-	-	-	-	-	-	1	1	100.0	-	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: 1. (1) Cases from active surveillance
(2) Cases from passive surveillance
(3) Investigated cases
(3-1) Percentage of cases investigated
(4) Confirmed Cases (AFP cases were confirmed by neurologists, others by lab and clinical symptoms.)
2. Analysis unit: reporting jurisdictions.

Table 10 National Immunization coverage — by counties/cities

Unit：%

Vaccines	BCG			DTP (including DT,DTaP,5in1,6in1)					
Birth cohort	2009			2009			2008		
Dose	single dose			3rd dose			4th dose		
Locality	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage
Total	194,735	190,308	97.73	194,735	187,590	96.33	198,121	188,175	94.98
Taipei City	22,156	21,691	97.90	22,156	21,578	97.39	22,215	21,106	95.01
Kaohsiung City	11,626	11,446	98.45	11,626	11,261	96.86	11,940	11,364	95.18
Taipei County	32,359	30,998	95.79	32,359	30,483	94.20	32,666	30,929	94.68
Yilan County	3,577	3,520	98.41	3,577	3,489	97.54	3,530	3,387	95.95
Taoyuan County	19,008	18,716	98.46	19,008	18,337	96.47	19,555	18,750	95.88
Hsinchu County	5,988	5,883	98.25	5,988	5,769	96.34	6,184	5,801	93.81
Miaoli County	4,699	4,573	97.32	4,699	4,410	93.85	4,863	4,614	94.88
Taichung County	14,041	13,869	98.78	14,041	13,664	97.32	14,461	13,832	95.65
Changhua County	11,884	11,595	97.57	11,884	11,603	97.64	11,632	11,076	95.22
Nantou County	3,839	3,760	97.94	3,839	3,677	95.78	3,990	3,723	93.31
Yunlin County	5,758	5,738	99.65	5,758	5,668	98.44	6,025	5,831	96.78
Chiayi County	4,085	4,030	98.65	4,085	4,000	97.92	4,206	4,097	97.41
Tainan County	8,108	8,004	98.72	8,108	7,901	97.45	8,328	8,062	96.81
Kaohsiung County	9,853	9,515	96.57	9,853	9,333	94.72	10,089	9,184	91.03
Pingtung County	6,104	6,005	98.38	6,104	5,912	96.85	6,412	5,992	93.45
Taitung County	1,827	1,761	96.39	1,827	1,728	94.58	1,907	1,790	93.86
Hualien County	2,560	2,549	99.57	2,560	2,458	96.02	2,595	2,437	93.91
Penghu County	764	761	99.61	764	754	98.69	752	731	97.21
Keelung City	2,576	2,537	98.49	2,576	2,477	96.16	2,619	2,445	93.36
Hsinchu City	5,254	5,101	97.09	5,254	4,990	94.98	5,023	4,831	96.18
Taichung City	9,237	9,066	98.15	9,237	8,920	96.57	9,426	8,889	94.30
Chiayi City	2,010	1,951	97.06	2,010	1,954	97.21	2,177	2,072	95.18
Tainan City	6,229	6,064	97.35	6,229	6,067	97.40	6,415	6,172	96.21
Kinmen County	1,087	1,069	98.34	1,087	1,051	96.69	1,014	967	95.36
Lienchiang County	106	106	100.00	106	106	100.00	97	93	95.88

Note 1. Source:National Immunization Information System.
2. Vaccination period:January 2008 to December 2010.
3. Data was calculated in January 2011.

Table 10 (Continued) National Immunization coverage — by counties/cities

Unit：%

Vaccines	OPV (including IPV,5in1,6in1)						Hepatitis B					
Birth cohort	2009			2008			2009			2009		
Dose	3rd dose			4th dose			2nd dose			3rd dose		
Locality	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage
Total	194,735	187,532	96.30	198,121	187,897	94.84	194,735	190,513	97.83	194,735	188,085	96.59
Taipei City	22,156	21,565	97.33	22,215	20,992	94.49	22,156	21,773	98.27	22,156	21,589	97.44
Kaohsiung City	11,626	11,255	96.81	11,940	11,344	95.01	11,626	11,401	98.06	11,626	11,269	96.93
Taipei County	32,359	30,478	94.19	32,666	30,869	94.50	32,359	31,124	96.18	32,359	30,669	94.78
Yilan County	3,577	3,488	97.51	3,530	3,382	95.81	3,577	3,544	99.08	3,577	3,497	97.76
Taoyuan County	19,008	18,333	96.45	19,555	18,736	95.81	19,008	18,694	98.35	19,008	18,434	96.98
Hsinchu County	5,988	5,770	96.36	6,184	5,800	93.79	5,988	5,871	98.05	5,988	5,790	96.69
Miaoli County	4,699	4,409	93.83	4,863	4,611	94.82	4,699	4,576	97.38	4,699	4,422	94.11
Taichung County	14,041	13,662	97.30	14,461	13,822	95.58	14,041	13,847	98.62	14,041	13,663	97.31
Changhua County	11,884	11,601	97.62	11,632	11,072	95.19	11,884	11,709	98.53	11,884	11,598	97.59
Nantou County	3,839	3,673	95.68	3,990	3,719	93.21	3,839	3,734	97.26	3,839	3,682	95.91
Yunlin County	5,758	5,665	98.38	6,025	5,822	96.63	5,758	5,728	99.48	5,758	5,670	98.47
Chiayi County	4,085	3,998	97.87	4,206	4,095	97.36	4,085	4,025	98.53	4,085	3,998	97.87
Tainan County	8,108	7,898	97.41	8,328	8,059	96.77	8,108	7,951	98.06	8,108	7,912	97.58
Kaohsiung County	9,853	9,331	94.70	10,089	9,181	91.00	9,853	9,552	96.95	9,853	9,361	95.01
Pingtung County	6,104	5,911	96.84	6,412	5,988	93.39	6,104	5,992	98.17	6,104	5,900	96.66
Taitung County	1,827	1,726	94.47	1,907	1,790	93.86	1,827	1,786	97.76	1,827	1,742	95.35
Hualien County	2,560	2,457	95.98	2,595	2,438	93.95	2,560	2,515	98.24	2,560	2,506	97.89
Penghu County	764	751	98.30	752	730	97.07	764	758	99.21	764	752	98.43
Keelung City	2,576	2,477	96.16	2,619	2,441	93.20	2,576	2,540	98.60	2,576	2,487	96.55
Hsinchu City	5,254	4,988	94.94	5,023	4,827	96.10	5,254	5,074	96.57	5,254	5,015	95.45
Taichung City	9,237	8,921	96.58	9,426	8,877	94.18	9,237	9,051	97.99	9,237	8,947	96.86
Chiayi City	2,010	1,954	97.21	2,177	2,072	95.18	2,010	1,954	97.21	2,010	1,957	97.36
Tainan City	6,229	6,065	97.37	6,415	6,171	96.20	6,229	6,138	98.54	6,229	6,067	97.40
Kinmen County	1,087	1,050	96.60	1,014	966	95.27	1,087	1,070	98.44	1,087	1,052	96.78
Lienchiang County	106	106	100.00	97	93	95.88	106	106	100.00	106	106	100.00

Note 1. Source:National Immunization Information System.
2. Vaccination period:January 2008 to December 2010.
3. Data was calculated in January 2011.

Table 10 (Continued) National Immunization coverage — by counties/cities

Unit：%

Vaccines	Varicella			MMR			JE					
Birth cohort	July, 2008 - June, 2009			2008			2008			2007		
Dose	single dose			single dose			2nd dose			3rd dose		
Locality	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage
Total	195,732	188,089	96.10	198,121	193,875	97.86	198,162	188,337	95.04	204,202	187,025	91.59
Taipei City	21,929	21,062	96.05	22,215	21,566	97.08	21,762	20,583	94.58	22,774	21,068	92.51
Kaohsiung City	11,755	11,317	96.27	11,940	11,673	97.76	11,902	11,288	94.84	12,369	11,320	91.52
Taipei County	32,576	30,816	94.60	32,666	31,813	97.39	32,743	30,961	94.56	33,618	28,713	85.41
Yilan County	3,552	3,448	97.07	3,530	3,472	98.36	3,555	3,406	95.81	3,661	3,461	94.54
Taoyuan County	19,148	18,496	96.59	19,555	19,251	98.45	19,786	18,820	95.12	20,455	19,090	93.33
Hsinchu County	6,054	5,833	96.35	6,184	6,052	97.87	6,183	5,838	94.42	6,258	5,768	92.17
Miaoli County	4,751	4,486	94.42	4,863	4,756	97.80	4,877	4,596	94.24	5,122	4,464	87.15
Taichung County	14,275	13,855	97.06	14,461	14,195	98.16	14,456	13,853	95.83	15,325	14,525	94.78
Changhua County	11,796	11,478	97.30	11,632	11,469	98.60	11,658	11,190	95.99	11,839	11,125	93.97
Nantou County	3,895	3,731	95.79	3,990	3,882	97.29	4,013	3,765	93.82	3,794	3,415	90.01
Yunlin County	5,804	5,689	98.02	6,025	5,949	98.74	6,003	5,816	96.88	6,039	5,778	95.68
Chiayi County	4,125	4,019	97.43	4,206	4,158	98.86	4,238	4,100	96.74	4,379	4,167	95.16
Tainan County	8,233	8,034	97.58	8,328	8,194	98.39	8,352	8,052	96.41	8,579	8,225	95.87
Kaohsiung County	9,981	9,430	94.48	10,089	9,757	96.71	10,134	9,407	92.83	10,278	9,166	89.18
Pingtung County	6,278	6,011	95.75	6,412	6,252	97.50	6,454	6,108	94.64	6,679	6,089	91.17
Taitung County	1,852	1,771	95.63	1,907	1,868	97.95	1,885	1,804	95.70	1,781	1,699	95.40
Hualien County	2,582	2,486	96.28	2,595	2,558	98.57	2,617	2,503	95.64	2,751	2,571	93.46
Penghu County	726	707	97.38	752	745	99.07	753	732	97.21	777	749	96.40
Keelung City	2,602	2,488	95.62	2,619	2,549	97.33	2,668	2,534	94.98	2,832	2,676	94.49
Hsinchu City	5,041	4,783	94.88	5,023	4,947	98.49	5,043	4,766	94.51	4,945	4,644	93.91
Taichung City	9,237	8,915	96.51	9,426	9,232	97.94	9,406	8,929	94.93	10,158	9,258	91.14
Chiayi City	2,004	1,933	96.46	2,177	2,133	97.98	2,171	2,086	96.08	2,204	1,999	90.70
Tainan City	6,383	6,190	96.98	6,415	6,308	98.33	6,391	6,150	96.23	6,503	6,061	93.20
Kinmen County	1,052	1,011	96.10	1,014	1,000	98.62	1,014	957	94.38	977	890	91.10
Lienchiang County	101	100	99.01	97	96	98.97	98	93	94.90	105	104	99.05

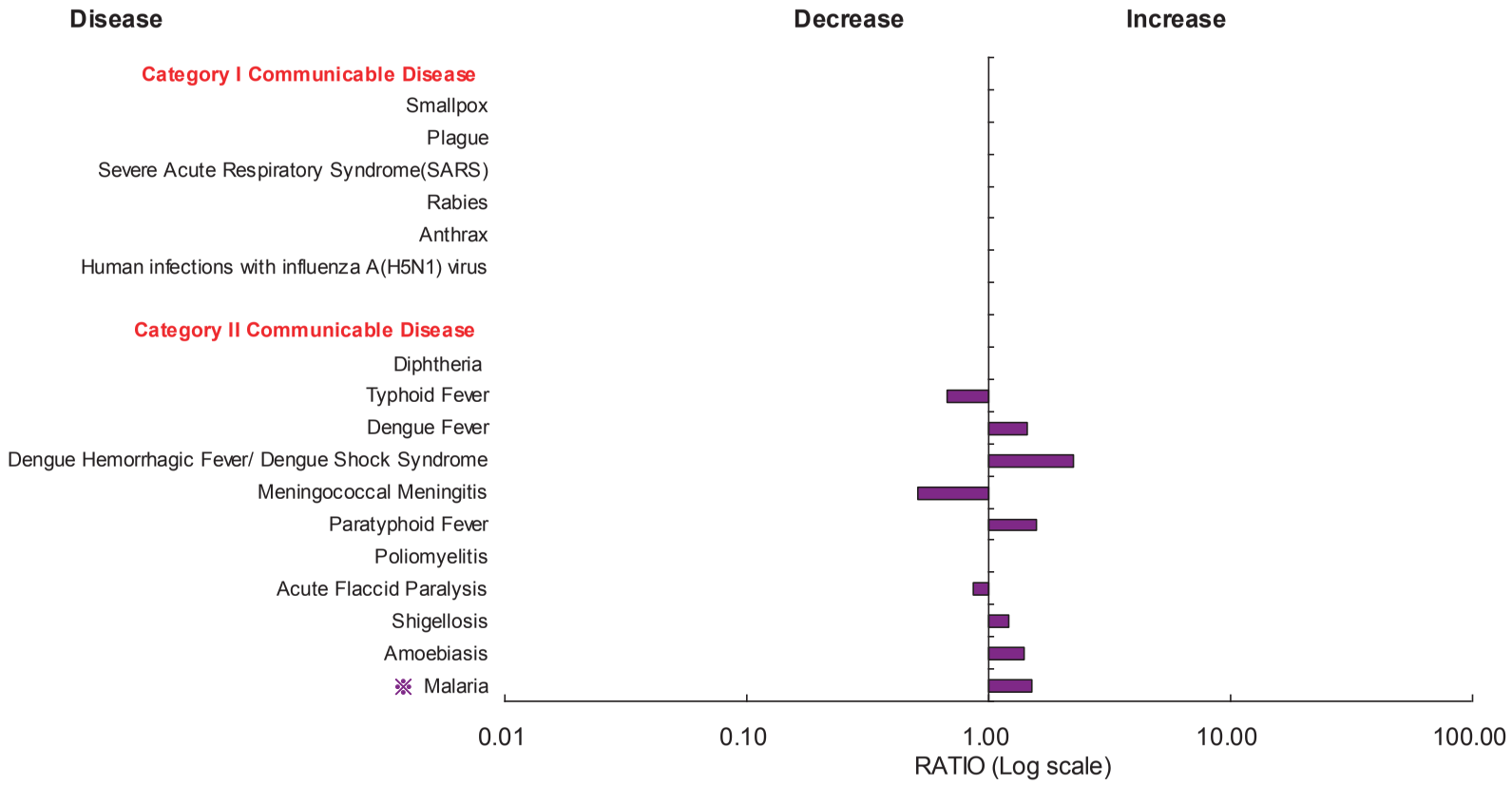
Note 1. Source:National Immunization Information System.
2. Vaccination period:January 2008 to December 2010 (JE: March 2009 to September 2010).
3. Data was calculated in January 2011(JE: in October 2010).

Table 10 (Continued) National Immunization coverage — by counties/cities

Unit：%

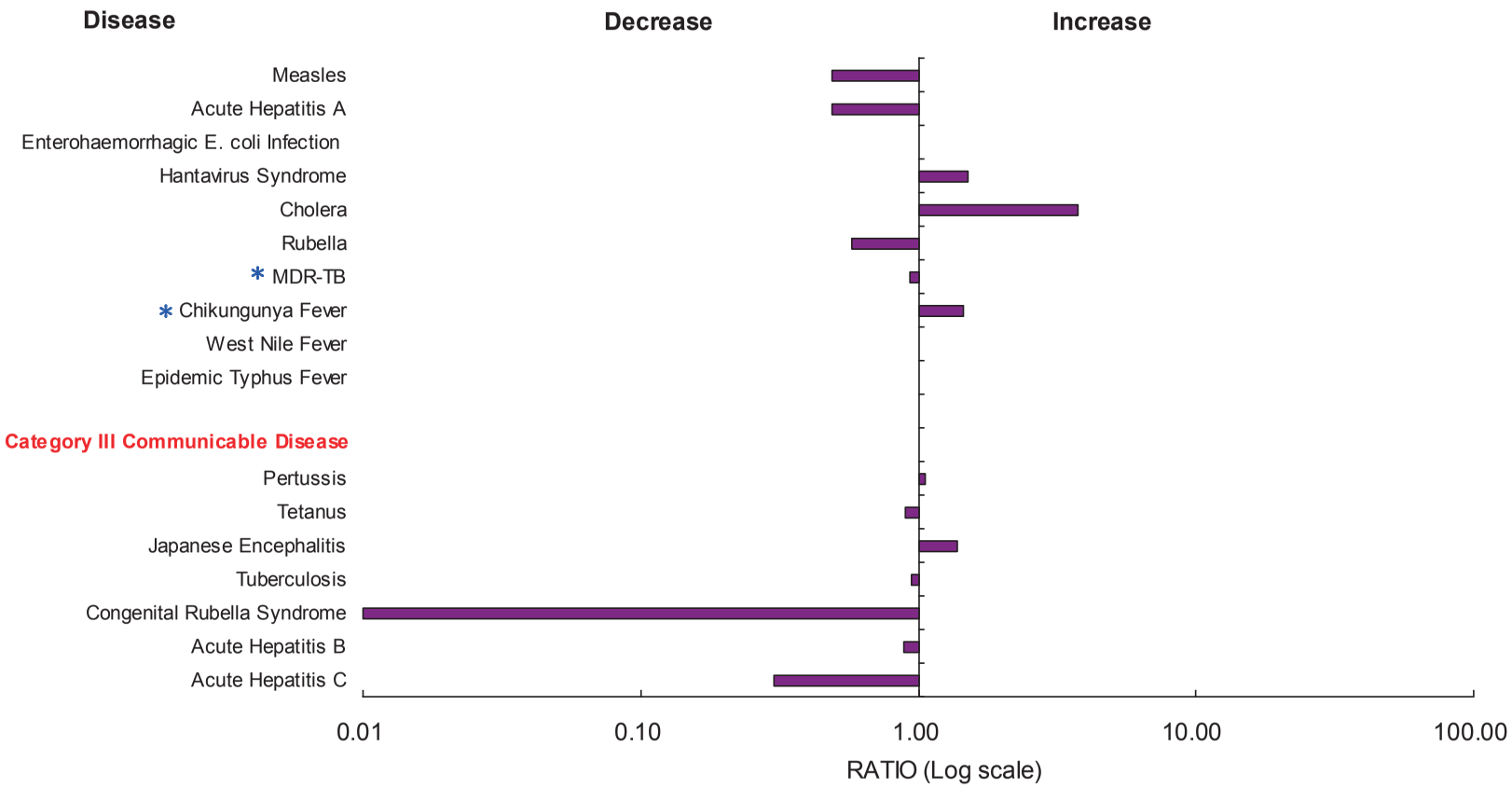
Vaccines	JE			MMR			Tdap			OPV		
Birth cohort	First grade of primary school											
Locality	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage
Total	232,974	226,726	97.32	228,590	224,741	98.32	227,786	224,505	98.56	227,872	224,693	98.60
Taipei City	23,199	22,895	98.69	23,150	22,854	98.72	23,236	22,941	98.73	23,231	22,955	98.81
Kaohsiung City	14,047	13,869	98.73	14,230	14,077	98.92	14,917	14,786	99.12	14,224	14,160	99.55
Taipei County	39,819	35,787	89.87	38,470	36,487	94.85	38,050	36,637	96.29	38,051	36,671	96.37
Yilan County	4,454	4,414	99.10	4,460	4,409	98.86	4,463	4,407	98.75	4,463	4,407	98.75
Taoyuan County	23,217	23,144	99.69	23,603	23,357	98.96	23,388	23,259	99.45	23,385	23,256	99.45
Hsinchu County	6,281	6,218	99.00	6,244	6,188	99.10	6,238	6,175	98.99	6,249	6,195	99.14
Miaoli County	5,923	5,814	98.16	5,852	5,631	96.22	5,862	5,746	98.02	5,873	5,660	96.37
Taichung County	17,290	17,170	99.31	17,200	17,120	99.53	17,223	17,100	99.29	17,192	17,053	99.19
Changhua County	13,716	13,674	99.69	13,932	13,899	99.76	13,932	13,895	99.73	13,932	13,895	99.73
Nantou County	5,358	5,262	98.21	5,199	5,137	98.81	5,121	5,042	98.46	5,121	5,042	98.46
Yunlin County	7,189	7,159	99.58	7,207	7,188	99.74	7,205	7,180	99.65	7,205	7,177	99.61
Chiayi County	4,922	4,875	99.05	4,942	4,924	99.64	4,938	4,920	99.64	4,940	4,919	99.57
Tainan County	9,888	9,877	99.89	9,690	9,688	99.98	9,680	9,672	99.92	9,675	9,674	99.99
Kaohsiung County	11,341	11,242	99.13	11,354	11,248	99.07	11,366	11,243	98.92	11,367	11,280	99.23
Pingtung County	8,390	8,239	98.20	8,283	8,195	98.94	8,037	7,879	98.03	8,037	7,910	98.42
Taitung County	2,258	2,246	99.47	2,235	2,234	99.96	2,377	2,374	99.87	2,413	2,410	99.88
Hualien County	3,209	3,185	99.25	3,244	3,236	99.75	3,247	3,244	99.91	3,247	3,242	99.85
Penghu County	820	818	99.76	816	814	99.75	817	811	99.27	816	810	99.26
Keelung City	3,444	3,365	97.71	3,460	3,429	99.10	3,459	3,434	99.28	3,459	3,434	99.28
Hsinchu City	5,091	4,988	97.98	2,249	2,158	95.95	2,199	2,086	94.86	2,199	2,088	94.95
Taichung City	12,075	11,711	96.99	11,470	11,303	98.54	11,470	11,305	98.56	11,470	11,326	98.74
Chiayi City	2,904	2,893	99.62	3,120	3,113	99.78	3,182	3,144	98.81	3,120	3,110	99.68
Tainan City	7,461	7,213	96.68	7,398	7,290	98.54	6,639	6,494	97.82	7,463	7,288	97.66
Kinmen County	582	572	98.28	685	665	97.08	643	634	98.60	643	634	98.60
Lienchiang County	96	96	100.00	97	97	100.00	97	97	100.00	97	97	100.00

Note 1. Source:National Immunization Information System.
2. Vaccination period:September 2009 to June 2010 (JE: March 2010 to September 2010).
3. Data was calculated in July 2010 (JE: in October 2010).



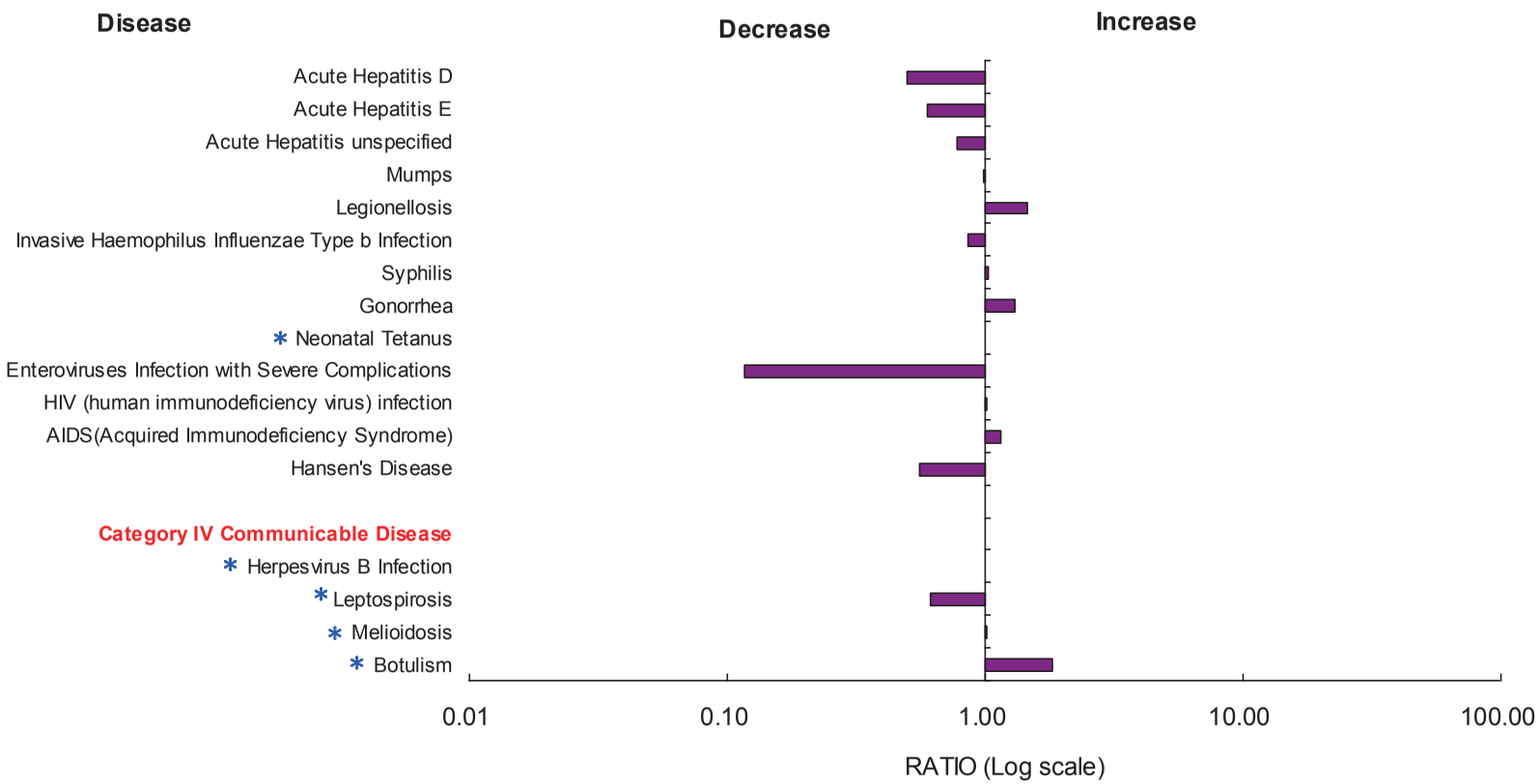
Note：1. Analysis unit:confirmed cases and its onset date.
2. Ratio = 2010 cases / means of 2007-2009.
3. The default value is 100 when denominator is zero and numerator is not zero. The default value is 0.01 when denominator is not zero and numerator is zero.
4. ※WHO has declared Taiwan as a malaria eradicated region in 1965. Since then all confirmed cases were imported ones.

Figure 1 Comparison of 2010 total confirmed cases of notifiable diseases with historical data



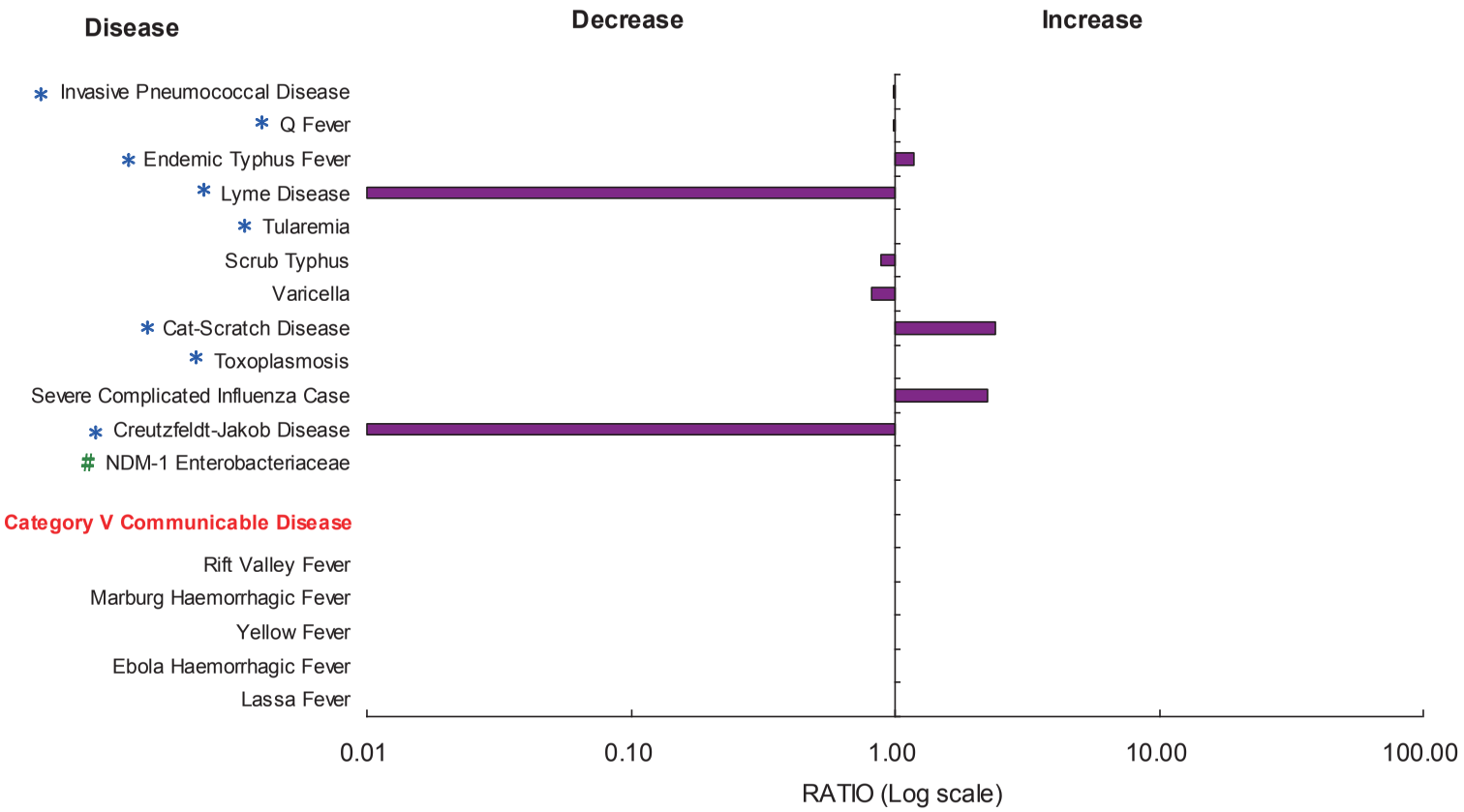
Note：1. Analysis unit:confirmed cases and its onset date.
2. Ratio = 2010 cases / means of 2007-2009.
3. The default value is 100 when denominator is zero and numerator is not zero.
The default value is 0.01 when denominator is not zero and numerator is zero.
4. For tetanus, varicella and mumps : based on reported cases.
5. ＊The statistics of MDR-TB and Chikungunya Fever were validated since October 15, 2007, hence the results were year 2010 compare with year 2008-2009.

Figure 1 (Continued) Comparison of 2010 total confirmed cases of notifiable diseases with historical data



Note：1. Analysis unit:confirmed cases and its onset date.
2. Ratio = 2010 cases / means of 2007-2009.
3. The default value is 100 when denominator is zero and numerator is not zero.
The default value is 0.01 when denominator is not zero and numerator is zero.
4. For tetanus, varicella and mumps: based on reported cases.
5. For syphilis and gonorrhea: based on the date of diagnosis.
6. The numbers of HIV infection and AIDS were estimated by the date of diagnosis, and foreign nationality were excluded.
7. ＊The statistics of Neonatal Tetanus, Herpesvirus B Infection, Leptospirosis, Melioidosis and Botulism were validated since October 15, 2007, hence the results were year 2010 compare with year 2008-2009.

Figure 1 (Continued) Comparison of 2010 total confirmed cases of notifiable diseases with historical data



Note : 1. Analysis unit:confirmed cases and its onset date.
2. Ratio = 2010 cases / means of 2007-2009.
3. The default value is 100 when denominator is zero and numerator is not zero.
The default value is 0.01 when denominator is not zero and numerator is zero.
4. For tetanus, varicella and mumps : based on reported cases.
5. ＊The statistics of Invasive Pneumococcal Disease, Q Fever, Endemic Typhus Fever, Lyme Disease,Tularemia, Cat-Scratch Disease, Toxoplasmosis and Creutzfeldt-Jakob Disease were validated since October 15, 2007, hence the results were year 2010 compare with year 2008-2009.
6. #The statistics of NDM-1 Enterobacteriaceae was validated since September 9, 2010, hence there was no comparative analysis results with historical data.

Figure 1 (Continued) Comparison of 2010 total confirmed cases of notifiable diseases with historical data

II Specific Surveillance Systems

—Republic of China (Taiwan), 2010

◎Abbreviations and Symbols Used in Table

— No reported cases.

… Not under surveillance.

Nosocomial Infections Surveillance System

I. Preface

The "nosocomial infection" is limited to describing infections that acquired after admission to the hospitals, while the "healthcare-associated infection" (HAI) generally refers to those infections that occur in all settings of care, including hospitals, long-term care facilities, homecare facilities, or outpatient departments. In order to respond to continuous evolving in the contents of medical services and the expansion of surveillance range, "healthcare-associated infection" instead of "nosocomial infection" was commonly used internationally as well as in the definition of infection surveillance in the acute care settings that published by the US CDC in 2008. To monitor the occurrence of HAIs effectively, to evaluate the epidemiologic trend of HAIs in Taiwan, and to set up internationally comparable surveillance indicators, therefore all the information could be made use of collectively to serve as important references for policy making, Taiwan CDC had revised and launched the Taiwan Nosocomial Infections Surveillance System (TNIS) in 2007. Moreover, strengthening in functions and the utility of the surveillance system is continuously going on. TNIS system not only helps to gather demographic data of HAI cases and patient-specific cultures and antimicrobial susceptibility results from reporting hospitals, but also provides a format report function, so that reporting hospitals can analyze their data locally as a reference in developing quality improvement initiatives.

II. Objectives

1. Establish the epidemiological database of HAI in Taiwan
2. Discovery of HAI trends
3. Facilitation of inter-and intra-hospital comparisons that can be used for quality improvement activities
4. Assistance for hospitals in developing the appropriate surveillance mechanism that permits timely recognition of infection control problems.

III. Reporting methods, data analysis, and feedback

TNIS adopts voluntary reporting, and each hospital may provide their data either through web-based entry or convey their data electronically through interchange platform. The web-based report mechanism mainly serves for the hospitals which lack HAI surveillance system of their own. Hospital staff enters the HAI data on the TNIS website directly. The other for the hospitals

which had built their own HAI surveillance system. However, to enable interoperability between hospital information systems (HIS) and TNIS system, infection control practitioner has to work on vocabularies mapping from local to standard codes and hospital information technology staff has to bridge the connection between the two systems and make the electronic data pack in a standard format according to the working instruction issued by Taiwan CDC. Through this mechanism, surveillance data could be routinely transferred from hospital information systems to the TNIS system automatically. This can save the hospital staff a lot of time because they would not need to repeatedly enter the data to both of hospital surveillance system and TNIS system. At present, more than 300 hospitals are reporting during 2010. Hospitals may use TNIS system to manage HAI cases and generate individual hospital reports. Also, Taiwan CDC periodically feedback hospitals with analysis report as a reference for inter- and intra-hospital comparisons, hope to facilitate hospitals to improve their quality in controlling HAIs and to safeguard the wellbeing of healthcare workers and the general public.

IV. Healthcare-associated infection surveillance data analysis content

1. TNIS hospitals in the intensive care units (ICUs) of medical centers and regional hospitals contributing data used in this report in 2010.
2. Distribution of HAI rates by type of location in the ICUs of medical centers and regional hospitals in 2010.
3. Distribution of device-associated infection rates in the ICUs of medical centers and regional hospitals in 2010.
4. Distribution of major sites of HAI in ICU patients from medical centers and regional hospitals in 2010.
5. Common pathogens of HAI for patients in the ICUs of medical centers in 2010.
6. Common pathogens of HAI for patients in the ICUs of regional hospitals in 2010.
7. Antimicrobial resistance proportions of selected pathogens of HAI in the ICUs of medical centers and regional hospitals in 2010.

V. Surveillance method and main results

In order to evaluate the general view of rates of HAIs and device-associated infections in Taiwan, the data source of rate distributions of HAIs and of device-associated infections in ICUs of medical centers and regional hospitals in 2010 were adopted by paper-based reports provided by all medical centers and regional hospitals, regardless it was in and not in TNIS system. Otherwise, all the analytical results in this report besides the aforesaid statement were derived from TNIS database (Table 11). This report should be considered provisional. When more information is

available in TNIS system, Taiwan CDC will provide the updated analysis report of comparison and trend of years on its website as a reference for the general public.

The distributions of HAI rate ((number of HAIs/number of patient-days)×1000‰) in ICUs of medical centers and regional hospitals are shown in Table 12. There were 830,180 patient-days with 7,761 person-times of HAI events occurred in the ICUs of 21 medical centers, the rate of infections was 9.3‰. However, in the ICUs of the 84 regional hospitals, there were 987,746 patient-days with 7,156 person-times of HAI events occurred, the rate of infections was 7.2‰. The HAI rates of ICUs were higher in medical centers than those in regional hospitals by corresponding types of ICU. The infection rate was highest in medical ICU for medical centers (11.1‰) and highest in surgical ICU for regional hospitals (8.8‰). The distributions of device-associated infection rate in ICUs ((number of device-associated infections/ number of device-days)×1000‰) are shown in Figure 2. The median of catheter-associated urinary tract infection (CAUTI) rates was 4.0‰ in medical centers and 2.7‰ in regional hospitals, and the median of central line-associated bloodstream infection (CLABSI) rates were 4.7‰ and 2.7‰ respectively, the rate of CAUTI and the rate of CLABSI in ICUs of medical centers are higher than those in regional hospitals; the median of ventilator-associated pneumonia (VAP) rates in regional hospitals is higher than that in medical centers, which are 1.2‰ and 0.9‰ respectively.

There were 20 medical centers and 84 regional hospitals participated in reporting HAI cases to TNIS system in 2010. The distribution of site-specific HAIs in ICUs is shown in Table 13, with the bloodstream infections infections topped the list in medical centers (37.7%), followed by urinary tract (36.8%), and pneumonia (12.1%). In regional hospitals, the urinary tract infections topped the list (35.3%), followed by bloodstream infections (29.3%), and pneumonia (21.5%). The common pathogens for HAIs in ICUs are shown in Table 14 and Table 15, the top three pathogens in the ICUs were *Candida* species, *Acinetobacter baumannii,* and *Pseudomonas aeruginosa* in medical centers; whereas there were *A. baumannii* , *Candida* species*,* and *Escherichia coli* in regional hospitals. The proportions of antimicrobial resistance among selected pathogens identified from patients in the ICUs with HAIs are shown in Figure 3. In the ICUs of medical centers, the proportion of *A. baumannii* isolates those were resistant to carbapenem (CRAB) is 66.8%, the proportion of *Klebsiella pneumoniae* isolates those were resistant to carbapenem (CRKP) is 11.5%, the proportion of *P. aeruginosa* isolates those were resistant to carbapenem (CRPA) is 18.2%, the proportion of enterococci isolates those were resistant to vancomycin (VRE) is 23.6%, and the proportion of *S. aureus* isolates those were resistant to oxacillin (MRSA) is 76.7%. Meanwhile, the antimicrobial resistance proportions of selected pathogens isolated from patients acquired HAIs in the ICUs of regional hospitals were 73.1%, 6.9%, 19.7%, 15.5% and 76.5% for CRAB, CRKP, CRPA, VRE and MRSA, respectively.

VI. 2010 Data analysis of HAI in the ICUs of medical centers and regional hospitals

Table 11 TNIS hospitals in the ICUs of medical centers and regional hospitals contributing data used in this report, 2010

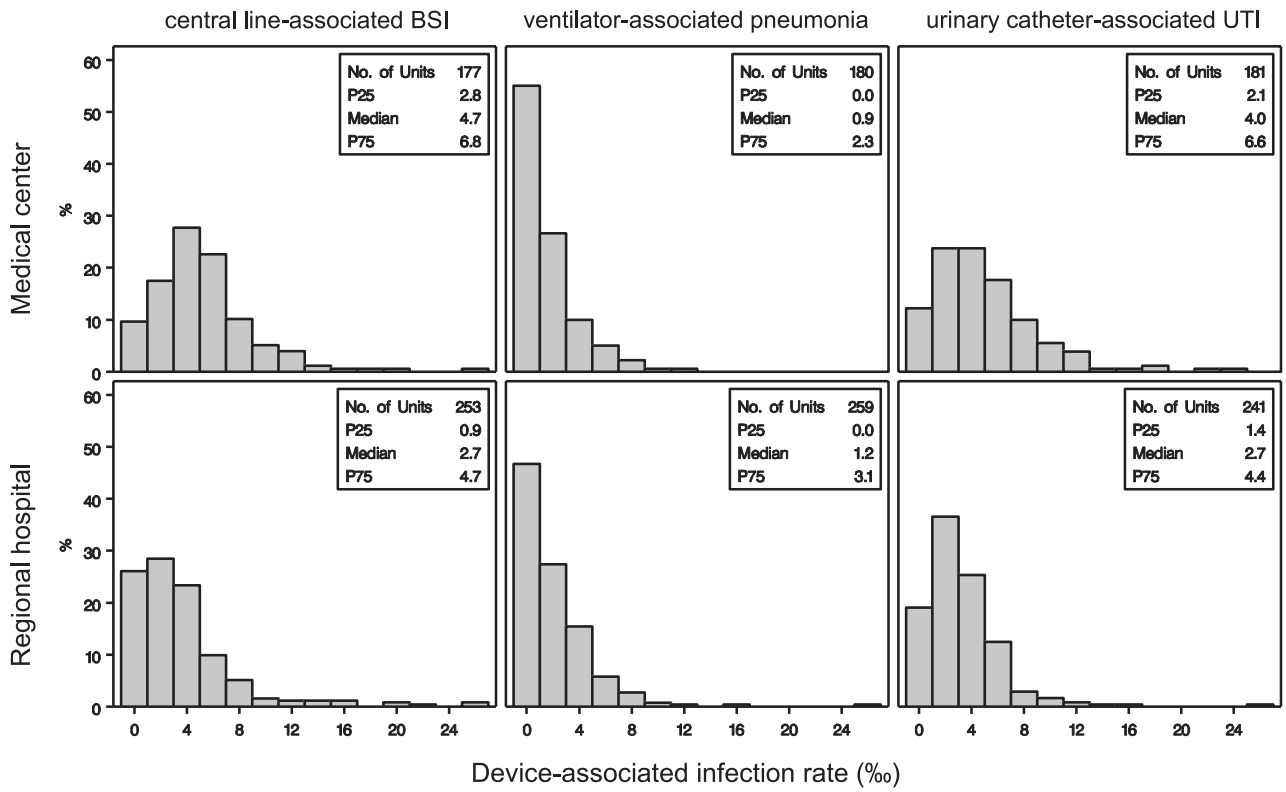
Hospital level	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter	
	No. of hospitals	No. of HAIs	No. of hospitals	No. of HAIs	No. of hospitals	No. of HAIs	No. of hospitals	No. of HAIs
Medical center	20	1,687	20	1,705	20	1,716	20	1,699
Regional hospital	81	1,636	83	1,676	81	1,656	82	1,752

Note: Data updated to 2011/05/24

Table 12 Distribution of healthcare-associated infection rates by type of locations in the ICUs of medical centers and regional hospitals, 2010

Hospital level	Type of locations	No. of units	No. of HAIs	Patient -days	HAI Rate* (‰)	Percentile		
						25	50	75
Medical center	Medical ICU	54	2,757	248,038	11.1	7.7	10.5	13.4
	Surgical ICU	73	3,046	282,354	10.8	7.4	9.5	14.0
	Cardiology ICU	15	510	64,806	7.9	5.8	7.5	10.1
	Pediatric ICU	44	675	161,965	4.2	2.7	4.0	5.9
	Medical/surgical ICU	16	773	73,017	10.6	7.5	9.4	15.2
	Total	202	7,761	830,180	9.3	5.8	8.6	12.3
Regional hospital	Medical ICU	71	2,348	320,827	7.3	4.9	7.4	10.1
	Surgical ICU	50	1,650	186,846	8.8	5.9	8.4	10.5
	Cardiology ICU	13	190	41,095	4.6	2.9	3.7	4.9
	Pediatric ICU	63	75	56,172	1.3	0.0	0.0	2.1
	Medical/surgical ICU	99	2,893	382,806	7.6	5.0	7.1	9.8
	Total	296	7,156	987,746	7.2	2.8	6.2	9.0

Note: 1. Data sources were adopted by paper-based reports provided by medical centers and regional hospitals;
2. healthcare-associated infection rate= (number of HAIs/number of patient-days) ×1000‰



Note: 1. device-associated infection rate= (number of HAIs/number of device-days) ×1000‰;
2. each analysis of ICU data excluded rates for units that reported more device-associated HAIs than total HAIs or more device-days than patient-days ;
3. UTI, urinary tract infection; BSI, bloodstream infection

Figure 2 Distribution of device-associated infection rates in the ICUs of medical centers and regional hospitals, 2010

Table13 Distribution of major types of healthcare-associated infection in the ICU patients from medical centers and regional hospitals, 2010

Types of infection	Medical center		Regional hospital	
	No.	%	No.	%
Urinary tract	2,505	36.8	2,370	35.3
Bloodstream	2,563	37.7	1,970	29.3
Pneumonia	823	12.1	1,446	21.5
Surgical site	342	5.0	309	4.6
Other	574	8.4	625	9.3
Total	6,807	100.0	6,720	100.0

Note: proportion of specific infection type= (number of specific infection type /number of overall infection)×100%

Table 14 Common pathogens of healthcare-associated infections in the ICUs of medical centers,2010

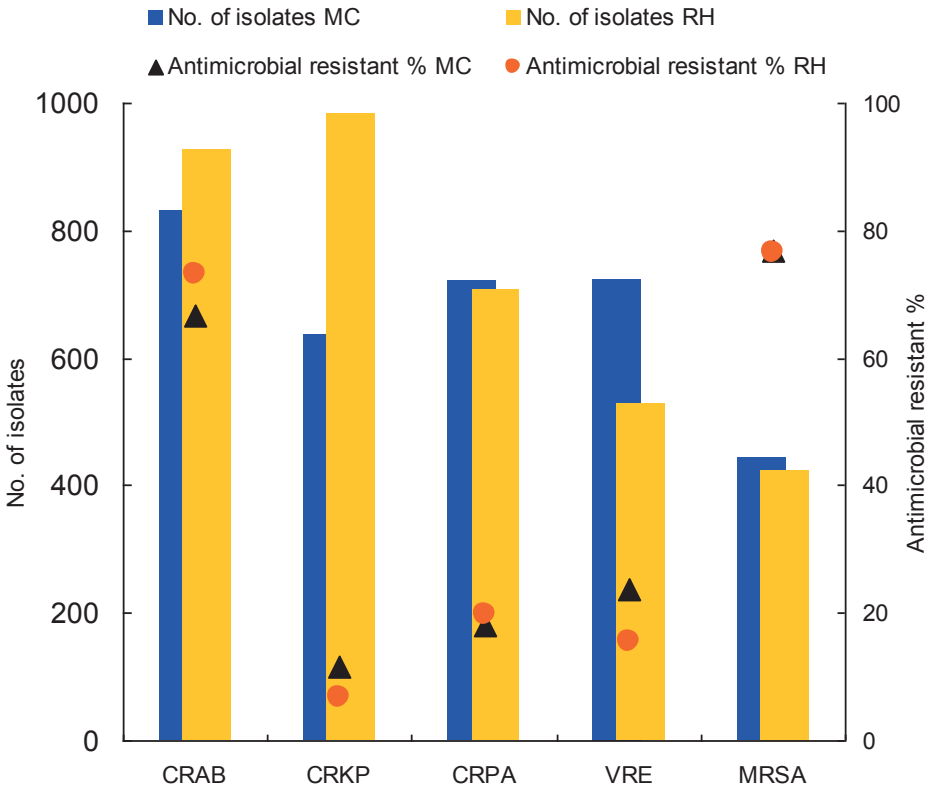
Pathogens	Total		Types of Infection									
			Urinary tract		Bloodstream		Pneumonia		Surgical site		Others	
	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.
Candida species	1		1		2		9		8		5	
C. albicans		701		466		165		18		19		33
Other Candida spp. or NOS		427		249		158		4		3		13
Acinetobacter baumannii	2	843	6	146	1	364	1	212	2	43	3	78
Pseudomonas aeruginosa	3	753	4	253	6	189	2	174	1	68	4	69
Escherichia coli	4	656	2	435	8	133	8	22	4	39	8	27
Klebsiella pneumoniae	5	537	5	169	4	214	3	89	6	32	6	33
Yeast-like	6	505	3	416	14	38	10	14	9	14	9	23
Staphylococcus aureus	7	469	9	30	3	239	4	87	7	28	2	85
Enterobacter species	8		7		5		6		5		10	
E. cloacae		292		62		153		33		28		16
Other Enterobacter spp. or NOS		87		20		41		12		10		4
Coagulase negative staphylococci	9	348	11	24	7	186	18	6	3	42	1	90
Stenotrophomonas maltophilia	10	227	14	13	9	110	5	78	11	12	11	14
Others	-	1,999	-	552	-	935	-	147	-	183	-	182
Total	-	7,844	-	2,835	-	2,925	-	896	-	521	-	667

Note: 1. isolates of the same species of bacteria, regardless of antimicrobial susceptibility pattern, are counted only once per patient per infection. That is, no duplicate isolates are included; 2. NOS: not otherwise specified

Table 15 Common pathogens of healthcare-associated infections in the ICUs of regional hospitals, 2010

Pathogens	Total		Types of Infection									
			Urinary tract		Bloodstream		Pneumonia		Surgical site		Others	
	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.
Acinetobacter baumannii	1	1,003	5	178	1	263	1	392	3	46	1	124
Candida species	2		1		3		9		7		6	
C. albicans		648		421		129		31		29		38
Other *Candida* spp. or NOS		285		163		96		10		2		14
Klebsiella pneumoniae	3	793	3	272	5	201	3	220	5	32	4	68
Pseudomonas aeruginosa	4	757	4	239	6	131	2	264	1	51	3	72
Escherichia coli	5	741	2	493	7	119	7	55	2	50	8	24
Staphylococcus aureus	6	504	10	35	2	227	4	149	6	31	5	62
Coagulase negative staphylococci	7	354	9	39	4	210	15	9	9	17	2	79
Enterobacter species	8		8		8		5		4		9	
E. cloacae		220		58		76		38		31		17
Other *Enterobacter* spp. or NOS		77		17		19		24		11		6
Yeast-like	9	230	6	144	11	47	14	10	18	4	7	25
Stenotrophomonas maltophilia	10		7		13		12		8		10	
Proteus mirabilis		156		78		26		18		15		19
Other *Proteus* spp. or NOS		12		4		1		4		3		0
Others	-	1,649	-	460	-	632	-	286	-	144	-	127
Total	-	7,429	-	2,601	-	2,177	-	1,510	-	466	-	675

Note: 1. isolates of the same species of bacteria, regardless of antimicrobial susceptibility pattern, are counted only once per patient per infection. That is, no duplicate isolates are included; 2. NOS: not otherwise specified



Note:
1. Intermediate and resistant results of antibiotic susceptibility tests were categorized as antimicrobial resistant
2. CRAB: carbapenem (imipenem or meropenem)-resistant *Acinetobacter baumannii*; CRKP: carbapenem (imipenem, meropenem, or ertapenem)-resistant *Klebsiella pneumoniae*; CRPA: carbapenem (imipenem or meropenem)-resistant *Pseudomonas aeruginosa*; VRE: vancomycin-resistant enterococci (Enterococcus faecalis, Enterococcus faecium...etc.); MRSA: oxacillin-resistant *Staphylococcus aureus*.

Figure 3. Antimicrobial resistances of selected pathogens of healthcare-associated infections in the ICUs of medical centers and regional hospitals, 2010

School-based Surveillance System

I. Introduction

The school-based surveillance system monitors principally common communicable diseases among school children. Elementary schools are places of high population density and school children tend to have lower resistance to diseases. The outbreak of a disease in class can easily reach epidemic proportion. For the purpose of effectively detecting and controlling the spread of communicable diseases on school grounds, the Centers for Disease Control (CDC) launched a pilot program for schools to monitor and report infectious diseases since February 2001. Starting out with 20 reporting schools, there are now 634 elementary schools taking part in the program that aims to grasp the long-term trends of communicable diseases in school children, in order to facilitate early detection of pathogen and prevention of epidemics.

II. Objectives of surveillance system

Through the school-based surveillance system, Taiwan CDC is able to track the trends of occurrence of infectious diseases in schools. Such information enables Taiwan CDC to predict the possibility of an outbreak, monitor closely an epidemic from the early stage, and take timely control measures, including collaboration with school sanitation and hygiene education programs to prevent the spread of the disease in schools and safeguard the health of school children. The school-based surveillance system is a simple, flexible, specific and sensitive system that can timely and effectively reflect the status of communicable disease surveillance and reporting, and gather communicable disease data of school children systematically for analysis and interpretation as reference for evaluation and execution of control measures. Therefore, the occurrence of communicable diseases in schools should be monitored continuously to prevent the spread of those diseases to families or communities that may result in wider prevalence.

The database of the school-based surveillance system monitors communicable diseases based on a diversified surveillance and reporting system to render the reporting of diseases comprehensive.

III. Diseases under surveillance

Communicable diseases under surveillance include Influenza-like illness (ILI), hand-foot-mouth disease or herpangina, diarrhea, fever, acute hemorrhagic conjunctivitis, and other special communicable diseases, and so on.

IV. Reporting method, data analysis and data feedback

Schools participate in the surveillance system on a voluntary basis. The nurses of public primary schools report weekly case data to the system via the Internet before every Tuesday. Assigned staff at various substations of Taiwan CDC supervises then upload and watch whether other communicable diseases have been reported. The data are collected and analyzed each week, and made into a statistical chart that is periodically posted on Taiwan CDC's website, and fed back to the reporting schools, relevant health units and education units through the “Sentinel Surveillance Weekly Report” published weekly.

V. Selective analysis of reportable diseases

1. Influenza-like illness

■ Case definition:

Acute respiratory infection with the following symptoms:

(1) Sudden onset, with fever (ear temperature≧38℃) and respiratory infection; and

(2) Muscular soreness or headache or extreme fatigue.

■ Epidemic analysis:

According to the data from CDC school-based surveillance system, the morbidity of influenza-like illness in 2010 was between 0.13% and 0.33%. The overall situation is lower than that in 2008 and 2009, although the period from the 21th to the 23th week showed an uptrend.

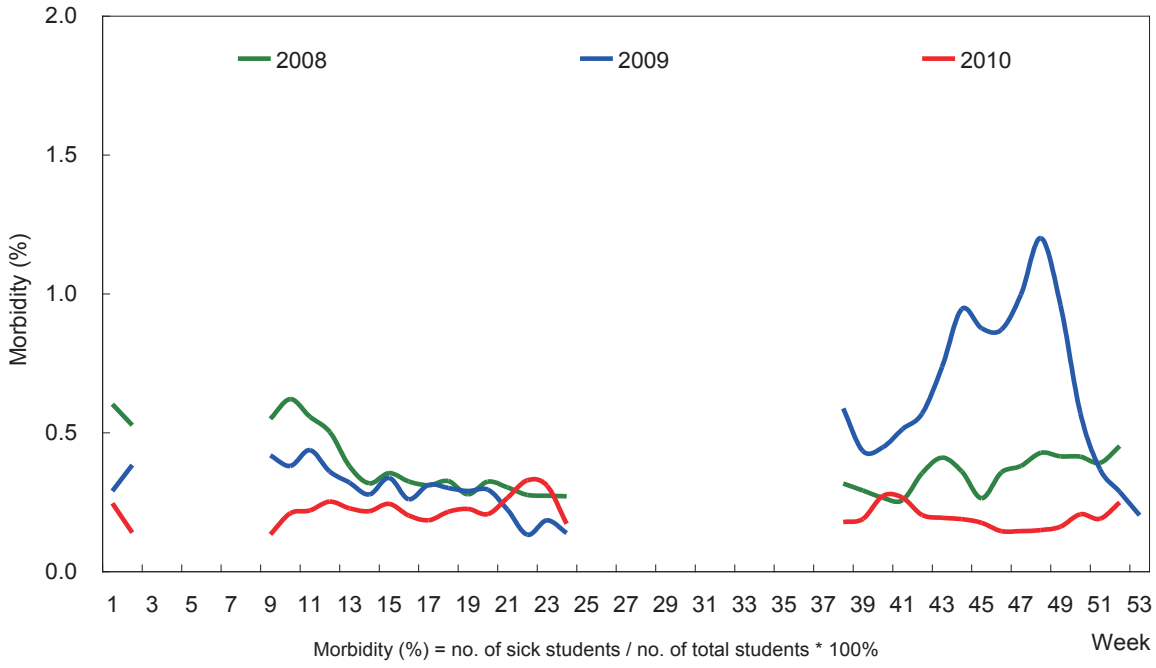


Figure 4 ILI morbidity reported by the School-based Surveillance System, 2008-2010

2. Hand-foot-mouth disease (HFMD) or herpangina

■ Case definition:

(1) Case definition of hand-foot-mouth disease: Vesicular lesions or rashes appear on mouth, palms, soles, and/or knees and buttocks.

(2) Case definition of herpangina: Fever and vesicular lesions or ulcer in pharyngeal area.

■ Epidemic analysis:

According to the data from CDC school-based surveillance system, the morbidity of hand-foot-mouth disease or herpangina in 2010 was between 0.007% and 0.212%. The overall situation is significantly higher than that in 2008 and 2009, although the period from the 1st to the 2nd week was comparatively stable.

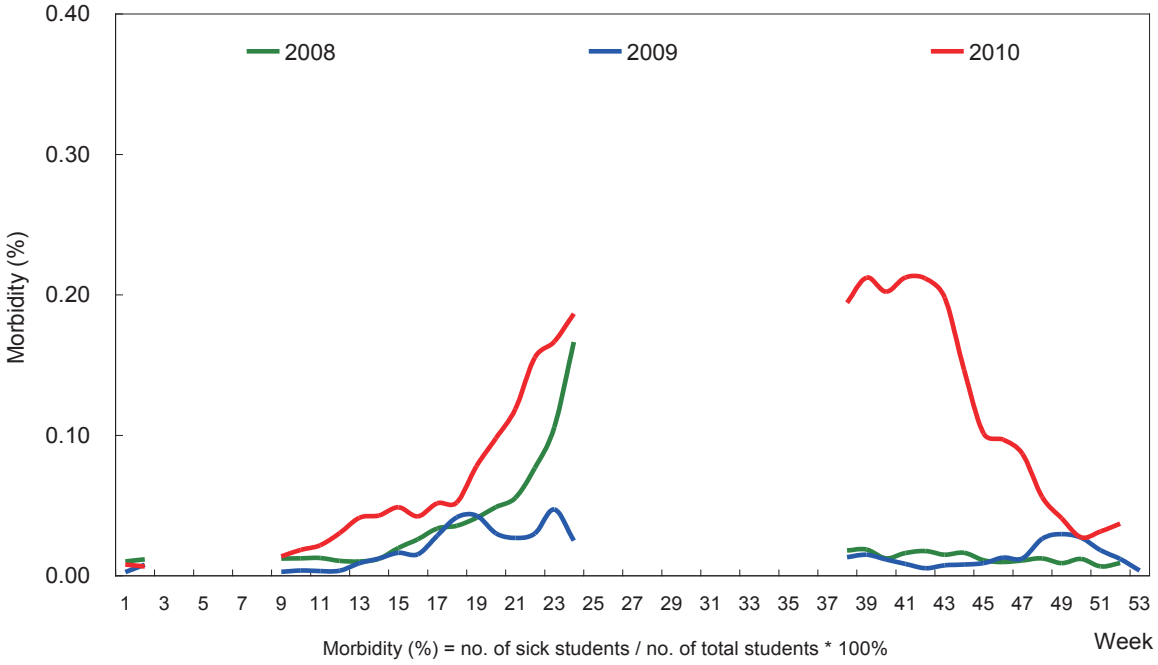


Figure 5 Enterovirus morbidity reported by the School-based Surveillance System, 2008-2010

3. Diarrhea

■Case definition:

Diarrhea three times or more per day, and accompanied by more than one of following symptoms:

(1)Vomiting.

(2)Fever.

(3)Mucous stool or hematochezia.

(4)Watery diarrhea.

■Epidemic analysis:

According to the data from CDC school-based surveillance system, the morbidity of diarrhea in 2010 was between 0.03% and 0.15%. The overall situation is higher than that in 2009 with an uptrend from the 49th to the 52th week.

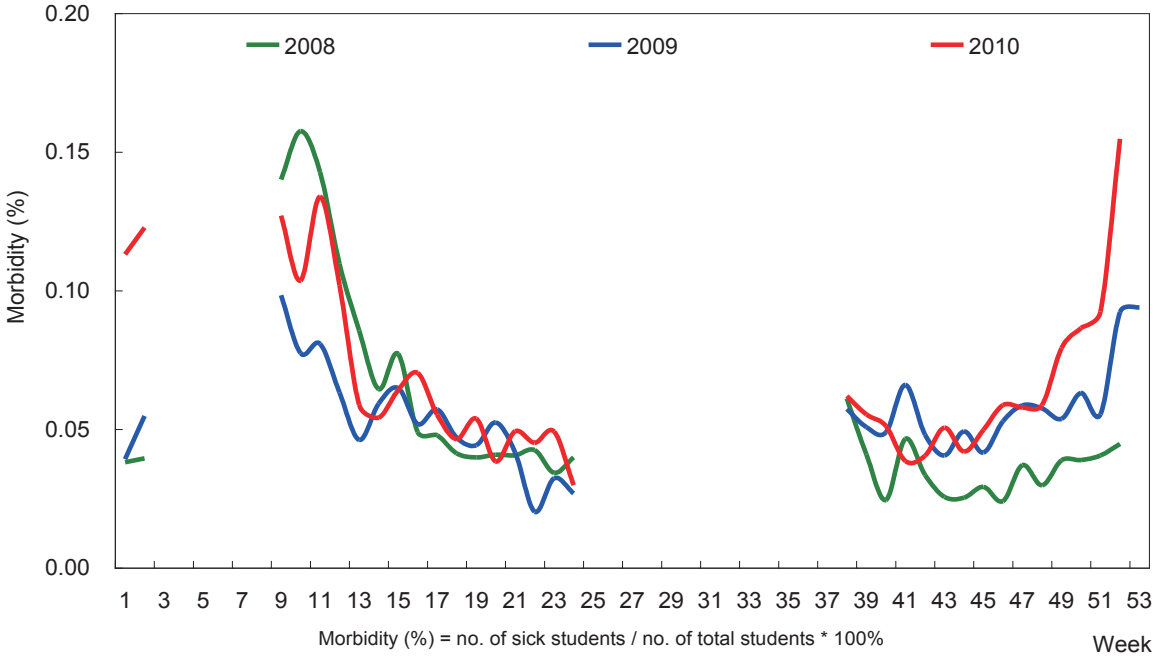


Figure 6 Diarrhea morbidity reported by the School-based Surveillance System, 2008-2010

4. Fever

■ Case definition:

Fever (ear temperature≧38℃) but free of the illness or symptoms of influenza-like illness, hand-foot-mouth disease or herpangina and diarrhea.

■Epidemic analysis:

According to the data from CDC school-based surveillance system, the morbidity of fever in 2010 was between 0.19% and 0.60%. The overall situation is lower than that in 2009, although the period from the 15th to the 24th week showed an uptrend.

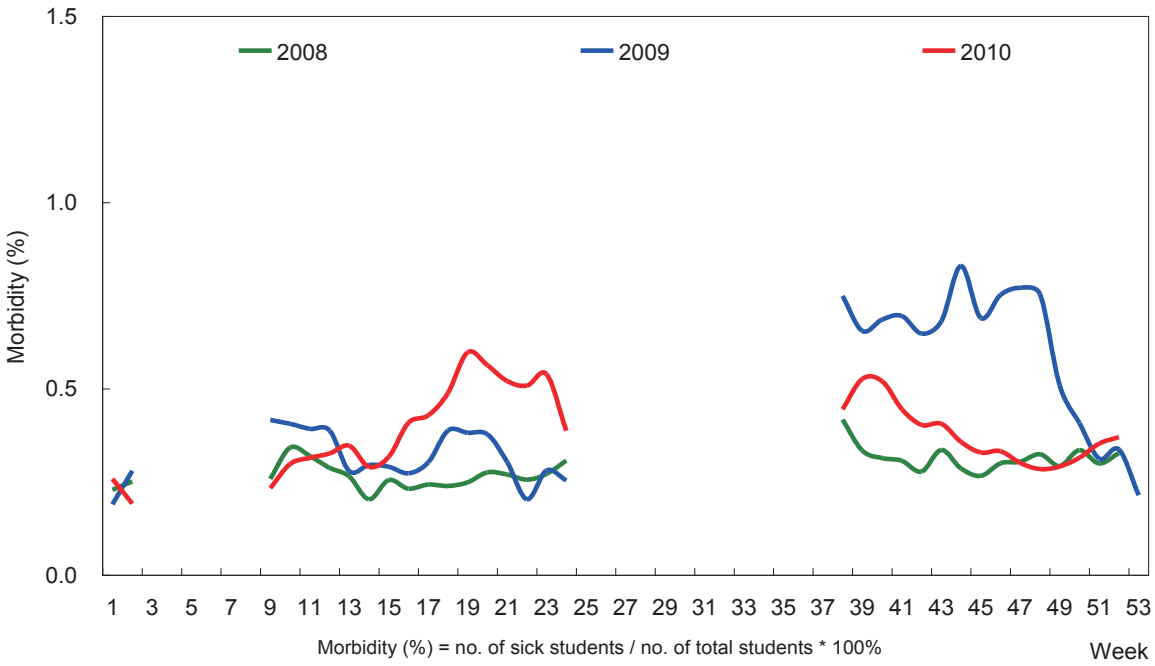


Figure 7 Fever morbidity reported by the School-based Surveillance System, 2008-2010

5. Acute hemorrhagic conjunctivitis (AHC)

■ Case definition:

Prickly, burning sensation of eyes, increased sensitivity to light, increased amount of tears, foreign body sensation, blurred vision; conjunctivas in bright redness, sometimes with subconjunctival hemorrhage; large amount of viscous discharge from the eyes; sometimes preauricular lymph node swelling and tenderness.

■Epidemic analysis:

According to the data from CDC school-based surveillance system, the morbidity of AHC in 2010 was between 0.006‰ and 2.211‰. The epidemic in 2010 showed two waves during the 38th to the 44th week and the 48th to the 50th week respectively with a significant upward trend during the 38th to the 44th week. The overall situation is higher than that in 2008 and 2009.

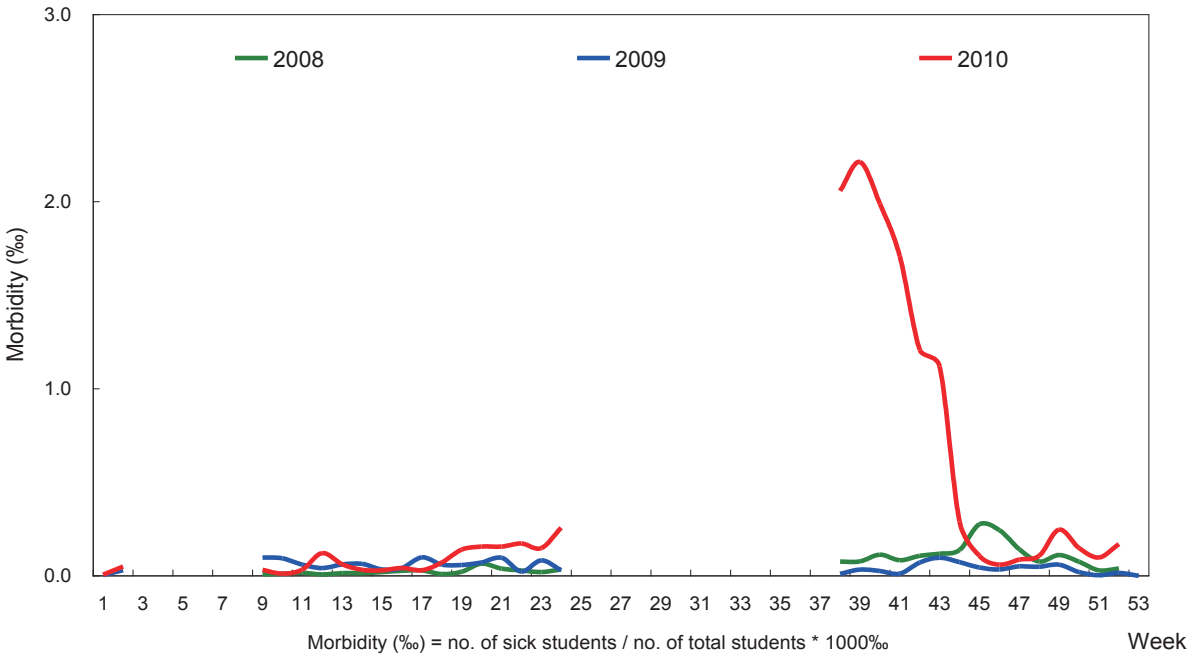


Figure 8 AHC morbidity reported by the School-based Surveillance System, 2008-2010

Laboratory Surveillance System

I. Origin

The outbreak of enterovirus epidemic in Taiwan in 1998 exposed the inadequacy of virology laboratories in Taiwan in both quality and quantity. Thus the Department of Health (DOH) has been setting up virology contracted laboratories across Taiwan since March 1999. Aside from providing subsidies to the contracted laboratories, DOH put forth great efforts in improving Taiwan's viral testing abilities and cultivation of talents. Currently, contracted laboratories are playing an important role in the testing of enterovirus and influenza virus in all areas across the country. The proactive detection system formed by the contracted laboratories and their specimen collecting sites provide good and timely laboratory diagnosis services. This system is an implementation of a tiered system for viral testing at the central and local levels which could improve the rate and timeliness of disease detection. The laboratory surveillance targets mainly the prevalent types of enterovirus and influenza virus in different years, their antigenicity and drug resistance that will enable Taiwan CDC to find out, for example, whether the prevalent influenza virus strains match vaccine strains for the year and the activities of important virus strains in different seasons. Such information provides useful references in the formulation of epidemic prevention policies, and contributes to the construction of a valuable native viral genome database and a biomaterial databases of viruses in Taiwan.

II. Distribution and responsibility areas of contracted laboratories

There were 10 virology contracted laboratories nationwide in 2010. Their distribution and responsibility areas are as follows: Northern Area - National Taiwan University Hospital (covering Taipei City, Kinmen County, and Lienchiang County), Chang Gung Memorial Hospital Linkou Branch (covering Taoyuan County, Hsinchu County and Hsinchu City), Tri-Service General Hospital (covering Taipei County, Keelung City, Yilan County and specimens from military hospitals); Central Area - China Medical University Hospital (covering Miaoli County and Taichung City), Taichung Veterans General Hospital (covering Taichung County and Nantou County), Changhua Christian Hospital (covering Changhua County and Yunlin County); Southern Area - National Cheng Gung University Hospital (covering Tainan County, Tainan City, Chiayi County and Chiayi City), Kaohsiung Medical University Hospital (covering Kaohsiung County, Pingtung County and Penghu County), and Kaohsiung Veterans General Hospital (covering Kaohsiung City); and Eastern Area -Buddhist Tzu Chi General Hospital (covering Hualien County and Taitung County).

III. Sources of specimens and testing process

The specimens for laboratory testing come mainly from the outpatients, hospitalized patients and emergency patients of medical centers where the contracted laboratories are located as well as from about 250 clinics across the country. The specimens are collected from patients suspected of influenza or enterovirus infection. The former must meet the case definition of influenza-like illness (fever above 38℃, and symptoms of coughing, sore throat or muscle ache, excluding mild rhinitis, tonsillitis and bronchitis). The latter must be patients with hand-foot-mouth disease or herpangina, and the specimens of individual cases must be collected within three days after the onset. In principle, each specimen collecting site should collect 2 specimens each week and send them to the contracted laboratory in the area for testing.

Another important task of the contracted laboratories is to test the specimens of reported enterovirus and severe complicated influenza cases. The specimens are collected by the reporting hospitals and transported with the assistance of the local health bureau to the contracted laboratories for relevant tests, and the results can be used as reference for clinical diagnoses of the individual cases.

1. Collection of specimens

Specimens collected in 2010 totaled 19,017, averaging 1,585 specimens a month. The numbers of specimens collected from Northern, Central, Southern and Eastern Areas were respectively 5,513, 6,887, 4,841 and 1,776. The Central Area provided the most specimens, followed by the Northern Area, Southern Area, and Eastern Area.

2. Prevalence of enterovirus

In 2010, 2,636 strains of enterovirus were isolated. After typing by immunofluorescence assay (IFA), it was found the dominant strains were coxsackie virus A (2,389 strains, 90.6%), followed by 86 strains of coxsackie virus B(3.3%), 51 strains of enterovirus type 71(1.9%), 44 strains of echovirus (1.7%), while 66 strains (2.5%) were nonpolio enteroviruses (NPEV).

Of the 2,398 strains of coxsackie virus A, there were 977 strains of CA16 (40.9%), followed by 633 strains of CA4 (26.5%). Of the 86 strains of coxsackie virus B, there were 49 strains of CB1 (56.89%). Of the 44 echovirus, there were 20 strains of echovirus type 4 (45.45%), followed by 17 strains of echovirus type 11 (38.64%). (See Figure 9 for distribution of weekly positive rate of enterovirus from specimens collected by contracted laboratories).

After typing of NPEV by gene sequencing, it was found the majority of NPEV were coxsackie virus A4, followed by coxsackie virus B2, coxsackie virus A16, echovirus type 7, coxsackie virus A6 and coxsackie virus A5.

To sum up, the top five types of enterovirus isolated in 2010 are coxsackie virus A16 (36.3%), coxsackie virus A4 (20%), coxsackie virus A6 (18%), coxsackie virus A5 (13.3%), and

enterovirus Type 71 (2%). (See Figure 10 for distribution of enterovirus types from specimens collected by sentinel physicians).

3. Prevalence of influenza virus

In 2010, 2,227 strains of influenza virus were isolated, of which, 453 strains (20.3%) belonged to pandemic influenza A (H1N1) virus, 988 strains (44.4%) of type AH3 and 783 strains of type B (35.2%) were isolated. INFB was the prevalent strain during weeks 1-28 of the year, while INFAH3 was the prevalent strain after week 29. (See Figure 11 for distribution of influenza virus from specimens collected by sentinel physicians)

After typing of isolated virus strains by gene sequencing, it was found all pandemic influenza A (H1N1) strains were A/California/07/2009, while no H1N1 subtype was found among seasonal influenza A viruses. All influenza A viruses subtype H3N2 were A/Perth/16/2009. Of the influenza B viruses, B/Brisbane/60/2008 (B/Vic) accounted for 90%, followed by B/Florida/4/2006 (B/Yam), and B/Malaysia/2506/2004 (B/Vic).

To sum up, the influenza virus types isolated in 2010 are ranked in sequence as INFAH3, INFB, and pandemic influenza A (H1N1). (See Figure 12 for distribution of influenza virus types from specimens collected by sentinel physicians).

4. Other respiratory tract viruses

Respiratory tract viruses other than influenza virus isolated include 591 cases of Adenovirus, 498 cases of Herpes simplex virus (HSV), 281 cases of Parainfluenza virus, 121 cases of Cytomegalovirus (CMV) and 113 cases of Respiratory syncytial virus (RSV). (See Figure 13 for distribution of positive rate of respiratory tract viruses from specimens collected by sentinel physicians).

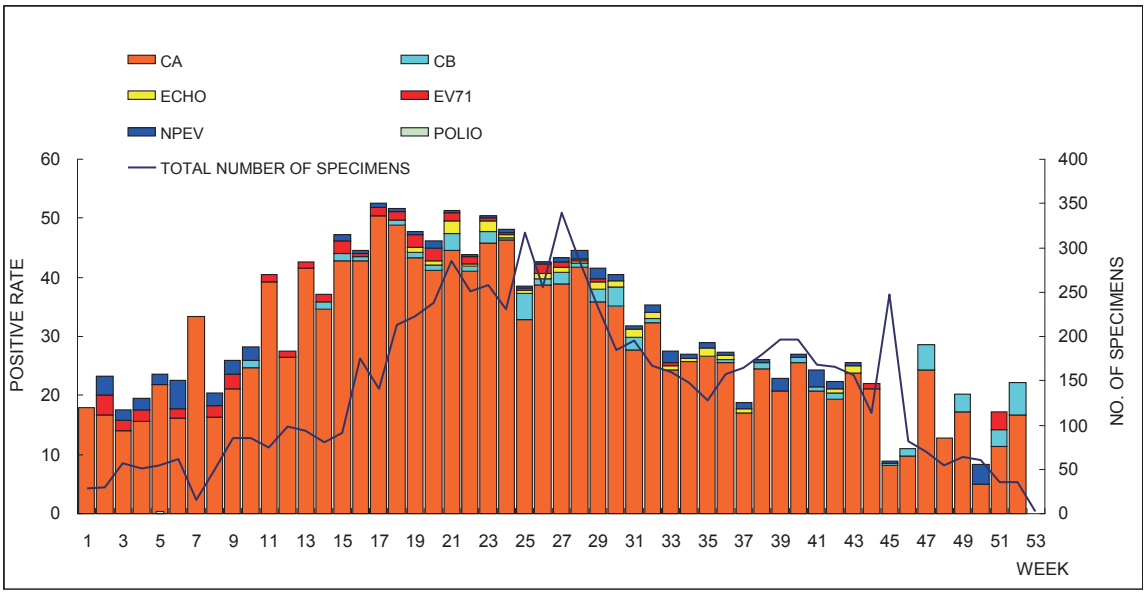


Figure 9 Enterovirus positive isolation rates in specimens collected by the sentinel physicians, 2010

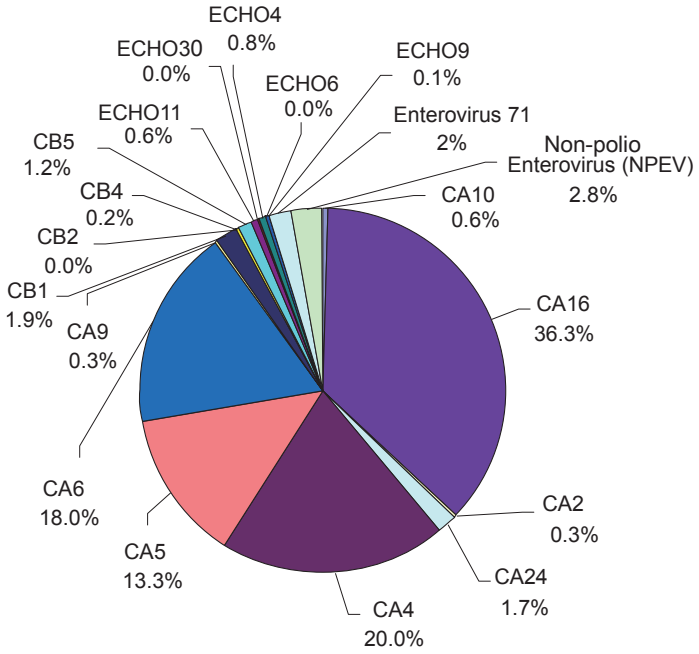


Figure 10 Strain ratios of enterovirus isolates from specimens collected by the sentinel physicians, 2010

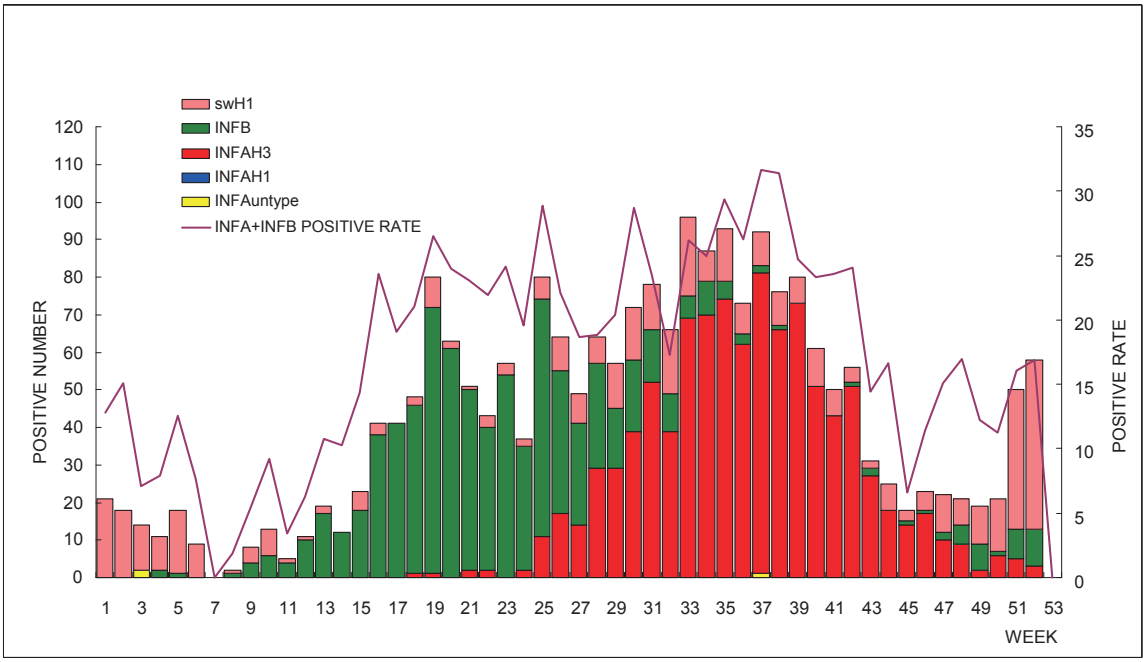


Figure 11 Isolation situations of influenza viruses from specimens collected by the sentinel physicians, 2010

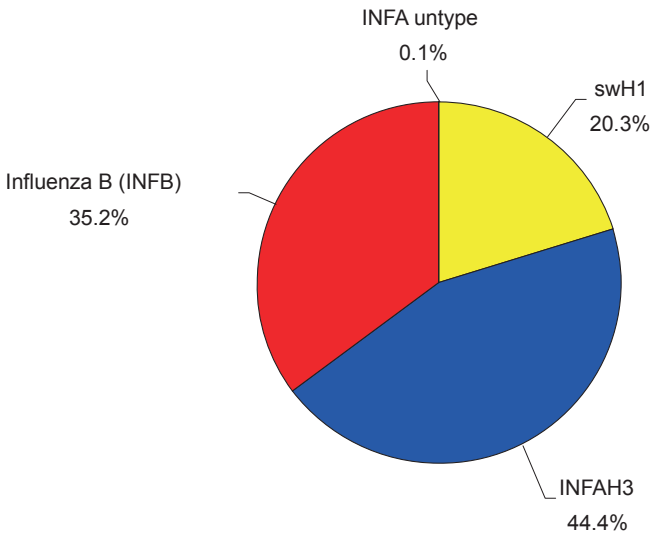


Figure 12 Strain ratios of influenza virus isolates from specimens collected by the sentinel physicians, 2010

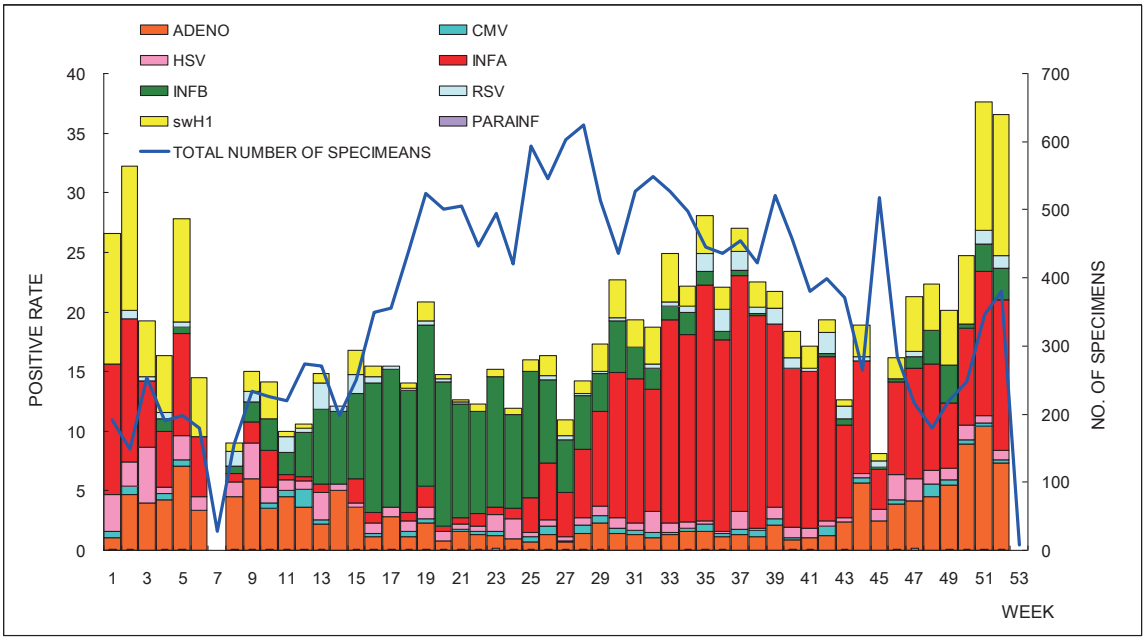


Figure 13 Positive isolation rates for respiratory tract viruses from specimens collected by the sentinel physicians, 2010

Quarantine Service

I. Health examination of foreign workers

To prevent the importation of diseases by foreign workers to the local population, all legally imported workers are required to submit a health certificate issued by an approved foreign hospital before applying for an entry visa. Foreign workers are also required to undergo health examination at a designated hospital in three days after arrival in Taiwan. To monitor the health conditions of foreign workers, employed foreign workers are required to take health examination within 30 days before or after the 6th, 18th and 30th month of employment in Taiwan. Currently designated health examination items required of foreign workers include: chest X-ray screening for tuberculosis, HIV antibody test, syphilis serological test, intestinal parasites test, pregnancy test, general physical examination, Hansen's disease test and antibody-positive report or vaccination certificate for measles and rubella. In addition, only the health examination conducted in the home country needs to include pregnancy test and antibody-positive report or vaccination certificate for measles and rubella.

Foreign workers who are found to have intestinal parasites (excluding amoebiasis) may have a treatment and recheck period of 45 days; those who are tested positive for syphilis should complete the treatment within 30 days; a foreign worker who fails any of the designated health examination items or has acquired any of the four communicable diseases designated by the central health authority shall be repatriated within the prescribed time period so as to ensure the health and safety of the local communities.

To prevent the importation of typhoid fever by foreign workers from Indonesia, for a period of two years starting from October 15, 2009, all Indonesian workers must be asked of symptoms of typhoid fever during health examination in their home country and subject to typhoid fever test (stool culture) and symptoms query during the health examination undertaken in three days after arrival in Taiwan.

In the 440,352 person-times health examinations conducted on foreign workers in Taiwan in 2010, 2,959 person-times were unqualified, representing an unqualified rate of 0.67%, of which, intestinal parasite diseases accounted for the highest unqualified rate with 2,360 person-times (0.54%), followed by chest X-ray tested for tuberculosis where 539 person-times (0.12%) were unqualified. On top of that, 40 people were tested positive for HIV antibody. (Table 16)

II. Health declaration of inbound passengers

To prevent communicable diseases from entering Taiwan by ships or aircrafts that could endanger the health and safety of people in Taiwan, Taiwan CDC carries out necessary quarantine measures for inbound passengers in accordance with the “Communicable Disease Control Act” and the “Regulations Governing Quarantine at Ports”, and tracks passengers who have symptoms to protect people’s health. Since July 1, 2002, inbound passengers having certain symptoms should fill out a “Symptom Declaration Form.” But from March 30, 2003, all inbound passengers were required to fill out a “SARS and Other Communicable Disease Survey Form” in response to the SARS epidemics. The “SARS and Other Communicable Disease Survey Form” was changed to the “Communicable Disease Survey Form” in January 2004. However, in consideration the benefit, manpower and resources, health declaration was again changed to filling out of a “Communicable Disease Survey Form” by inbound passengers having certain symptoms on December 1, 2004.

In 2010, of the 14,980,936 inbound passengers, 18,513 having certain symptoms filled out the “Communicable Disease Survey Form”, and were subsequently followed up and monitored by local health authorities. In the body temperature screening of inbound passengers conducted in 2010, 134 cases of dengue fever, 43 cases of shigellosis, 11 cases of chikungunya fever, 1 case of cholera (not a notifiable communicable disease), 16 cases of vibrio parahaemolyticus, and 8 cases of salmonellosis were detected (Table 17).

Table 16 Physical examinations status of foreign labors, 2010

Unit：person,%

Country	Physical Examinations		Failed	X-ray	HIV	Syphilis	Parasites	Hansen's disease	Mental condition	Others
Thailand	At Entry	27,268	34 0.12%	14 0.05%	- -	- -	20 0.07%	- -	- -	- -
	Periodic	60,162	384 0.64%	93 0.15%	9 0.01%	- -	282 0.47%	- -	- -	- -
Indonesia	At Entry	42,722	43 0.10%	5 0.01%	1 0.002%	- -	37 0.09%	- -	- -	- -
	Periodic	132,472	989 0.75%	171 0.13%	15 0.01%	10 0.01%	793 0.60%	- -	- -	- -
Philippines	At Entry	23,828	31 0.13%	7 0.03%	3 0.01%	2 0.01%	19 0.08%	- -	- -	- -
	Periodic	71,376	597 0.84%	165 0.23%	9 0.01%	2 0.003%	421 0.59%	- -	- -	- -
Malaysia	At Entry	3	- -	- -	- -	- -	- -	- -	- -	- -
	Periodic	0	- -	- -	- -	- -	- -	- -	- -	- -
Vietnam	At Entry	22,007	50 0.23%	10 0.05%	- -	2 0.01%	38 0.17%	- -	- -	- -
	Periodic	60,513	831 1.37%	74 0.12%	3 0.004%	4 0.01%	750 1.24%	- -	- -	- -
Mongolia	At Entry	0	- -	- -	- -	- -	- -	- -	- -	- -
	Periodic	1	- -	- -	- -	- -	- -	- -	- -	- -
Others	At Entry	0	- -	- -	- -	- -	- -	- -	- -	- -
	Periodic	0	- -	- -	- -	- -	- -	- -	- -	- -
Total	At Entry	115,828	158 0.14%	36 0.03%	4 0.003%	4 0.003%	114 0.10%	- -	- -	- -
	Periodic	324,524	2,801 0.86%	503 0.15%	36 0.01%	16 0.004%	2,246 0.69%	- -	- -	- -
Total		440,352	2,959 0.67%	539 0.12%	40 0.01%	20 0.004%	2,360 0.54%	- -	- -	- -

Note1: The data of At Entry physical examination provided by the Council of Labor Affairs while the parasites failed persons indicated those who were after treatment. The data of Periodic physical examination provided by health bureaus of local governments while the parasites failed persons include who failed at the first test or re-tests after treatments.

Note2: Beginning on Feb. 28, 2009, the Blastocystis hominis found in the stool examination for intestinal parasites is considered qualified.

Table 17 Statistic of CDC "Communicable Diseases Survey Form " in 2010

Month	Inbound passenger No.	Cases with symptom		Pathogen detected		Note
		Case No.	Case percentage (%)	Notifiable disease (case No.)	Others (case No.)	(Traveling country)
Jan.	1,023,028	1,380	0.13	Dengue fever (3), Shigellosis (3)	Vibrio parahaemolyticus(2), Salmonella (2)	Indonesia (Dengue fever) / Indonesia (Shigellosis) / Thailand, Singapore (Vibrio parahaemolyticus) / Cambodia, China (Salmonella)
Feb.	1,288,818	1,439	0.11	Chikungunya fever (4), Dengue fever (16), Shigellosis (2)	Vibrio parahaemolyticus(2)	Indonesia(Chikungunya fever) / Indonesia, Thailand, Vietnam, Peru, Philippines, Malaysia (Dengue fever) / Indonesia, Vietnam(Shigellosis) / Thailand, Vietnam(Vibrio parahaemolyticus)
Mar.	1,199,317	1,300	0.11	Chikungunya fever (1), Dengue fever (10), Shigellosis (2)		Indonesia (Chikungunya fever) / Indonesia, Thailand, Vietnam, Malaysia (Dengue fever) / Philippines, Cambodia (Shigellosis)
Apr.	1,240,871	1,241	0.10	Dengue fever (4), Shigellosis (1)	Vibrio parahaemolyticus (3)	Thailand, Vietnam, Singapore, Malaysia (Dengue fever) / Myanmar (Shigellosis) / Indonesia, China (Vibrio parahaemolyticus)
May	1,253,969	1,233	0.10	Chikungunya fever (2), Dengue fever (4), Shigellosis (4)	Vibrio parahaemolyticus (2)	Indonesia (Chikungunya fever) / Indonesia, Malaysia (Dengue fever) / Indonesia, Philippines, Cambodia (Shigellosis) / Indonesia, Philippines (Vibrio parahaemolyticus)
Jun.	1,255,978	1,324	0.11	Chikungunya fever (1), Dengue fever (8), Shigellosis (3)	Vibrio parahaemolyticus (2), Salmonella (1)	Indonesia (Chikungunya fever) / Indonesia, Hong Kong, Thailand, Vietnam,Philippines (Dengue fever) / India, Cambodia, China (Shigellosis) / Philippines, China (Vibrio parahaemolyticus / Korea (Salmonella)
Jul.	1,380,990	2,109	0.15	Dengue fever (17), Shigellosis (8)	Vibrio parahaemolyticus (3), Salmonella (1)	Indonesia, Thailand, Vietnam, Myanmar, Laos, Singapore, Malaysia (Dengue fever) / Indonesia, Thailand, Vietnam, Philippines, Cambodia, China (Shigellosis) / Thailand, Philippines, China (Vibrio parahaemolyticus) / Indonesia (Salmonella)
Aug.	1,366,110	2,477	0.18	Chikungunya fever (1), Dengue fever (27), Shigellosis (1)	Salmonella (1)	Indonesia (Chikungunya fever) / Indonesia, Thailand, Vietnam, Korea, Philippines, Cambodia, Singapore, Bangla, Malaysia (Dengue fever) / Indonesia (Shigellosis) / Malaysia (Salmonella)
Sep.	1,210,337	2,118	0.17	Dengue fever (22), Shigellosis (14)	Vibrio parahaemolyticus (1), Salmonella (1), Vibrio cholerae (1) (not included in the list of notifiable communicable diseases)	Indonesia, India, Thailand, Vietnam, Myanmar, Philippines, Bangla, Malaysia(Dengue fever) / Indonesia, Cambodia, China(Shigellosis) / Philippines(Vibrio parahaemolyticus) / Malaysia(Salmonella) / Thailand(Vibrio cholerae)
Oct.	1,258,117	1,355	0.11	Chikungunya fever (1), Dengue fever (8), Shigellosis (4)	Salmonella (1)	Indonesia(Chikungunya fever) / Indonesia, Thailand, Vietnam,Myanmar(Dengue fever) / Indonesia, Thailand(Shigellosis) / Vietnam(Salmonella)
Nov.	1,259,641	1,080	0.09	Chikungunya fever (1), Dengue fever (6)	Vibrio parahaemolyticus (1), Salmonella (1)	Indonesia (Chikungunya fever) / Thailand, Vietnam, Philippines(Dengue fever) / Thailand(Vibrio parahaemolyticus) / Japan(Salmonella)
Dec.	1,243,760	1,457	0.12	Dengue fever (9), Shigellosis (1),		Indonesia, Vietnam, China, Malaysia(Dengue fever) / Indonesia(Shigellosis)
Total	**14,980,936**	**18,513**	**0.12**	**Chikungunya fever (11) , Dengue fever (134), Shigellosis (43)**	**Vibrio parahaemolyticus (16), Salmonella (8), Vibrio cholerae (1) (not included in the list of notifiable communicable diseases)**	

Mosquito Surveillance

Located in tropical and subtropical climate zone with hot and humid weather, Taiwan is a fertile ground for mosquito breeding. Major mosquito vectors in Taiwan include *Aedes aegypti* and *Aedes albopictus* spreading dengue fever and *Anopheles minimus* spreading malaria.

I. Dengue fever carrying mosquito

The dengue fever carrying mosquito surveillance has been set up since the outbreak of dengue fever in the south of Taiwan in 1988. An analysis of the surveys of mosquito vectors conducted in 2010 finds the following: the health bureaus of all counties and cities conducted 47,356 wards/villages, including 22,613 wards/villages in Level 0,15,180 wards/villages in Level I, 5,686 wards/villages in Level II, 2,773 wards/villages in Level III, 866 wards/villages in Level IV, 165 wards/villages in Level V, 64 wards/villages in Level VI, 5 wards/villages in Level VII, 4 wards/villages in Level VIII, and 0 wards/villages in Level IX (Table 18). The number of wards/villages above Level II displayed a rising trend month by month that was most apparent in June, August and October, and declined after October (Figure 14).

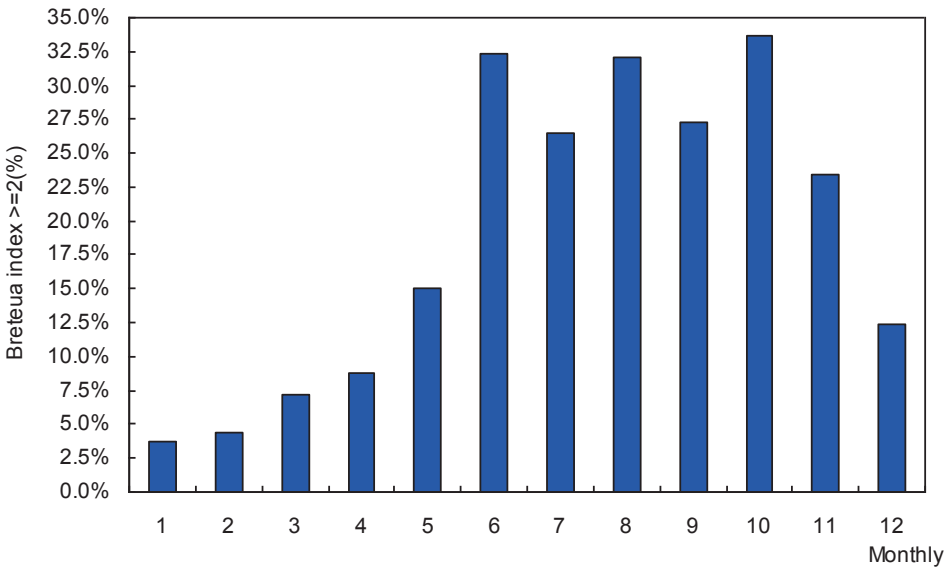


Figure 14 The percentage of wards/villages with Dengue fever vector by month in 2010

Table 18 Distribution of Breteua index, 2010

Locality	Villages (No.of times)	Breteua Index									
		0	1	2	3	4	5	6	7	8	9
Taipei City	1,741	891	767	74	7	1	-	-	1	-	-
Kaohsiung City	3,031	706	973	580	582	165	18	6	1	-	-
Kaohsiung County	9,156	3,240	2,942	1,304	1,115	421	91	41	2	-	-
Taipei County	2,811	2,125	552	97	28	5	3	-	1	-	-
Yilan County	1,201	1,087	101	7	6	-	-	-	-	-	-
Taoyuan County	2,901	2,729	163	7	1	-	1	-	-	-	-
Hsinchu County	732	558	155	19	-	-	-	-	-	-	-
Miaoli County	479	34	342	95	8	-	-	-	-	-	-
Taichung City	581	380	190	6	5	-	-	-	-	-	-
Taichung County	833	236	520	74	3	-	-	-	-	-	-
Changhua County	1,246	615	544	79	8	-	-	-	-	-	-
Nantou County	783	529	214	37	3	-	-	-	-	-	-
Yunlin County	953	636	313	4	-	-	-	-	-	-	-
Chiayi County	876	858	18	-	-	-	-	-	-	-	-
Tainan City	3,578	924	1,707	676	224	39	6	2	-	-	-
Tainan County	5,105	1,258	2,061	1,333	323	101	19	7	-	3	-
Pingtung County	3,932	968	1,652	813	355	112	25	6	-	1	-
Taitung County	3,842	1,907	1,365	444	103	19	2	2	-	-	-
Hualien County	911	865	45	1	-	-	-	-	-	-	-
Penghu County	280	250	28	2	-	-	-	-	-	-	-
Keelung City	336	185	137	9	2	3	-	-	-	-	-
Hsinchu City	448	228	196	24	-	-	-	-	-	-	-
Chiayi City	1,503	1,327	175	1	-	-	-	-	-	-	-
Kinmen County	58	41	17	-	-	-	-	-	-	-	-
Lienchiang County	39	36	3	-	-	-	-	-	-	-	-
Total	**47,356**	**22,613**	**15,180**	**5,686**	**2,773**	**866**	**165**	**64**	**5**	**4**	**-**

II. Malaria carrying mosquito

In 2010, mosquito light traps were hanged for collection of adult mosquitoes in 83 townships and 314 villages, including Pingxi Township, Pinglin Township, Wulai Township, and Shuangxi Township in Taipei County; Yangmei Township and Longtan Township in Taoyuan County; Qionglin Township and Hengshan Township in Hsinchu County; Sanwan Township, Dahu Township and Tai-an Township in Miaoli County; Donghi Township in Taichung County; Ren-ai Township and Guoxing Township in Nantou County; Huatan Township, Yuanlin Township, and Changhua City in Changhua County; Erlun Township, Kouhu Township, Tuku Township, Dapi Township, Yuanchang Township, Shuilin Township, Beigang Township, Gukeng Township, Taixi Township, Sihu Township, Xiluo Township, Dongshi Township, Linnei Township, Lunbei Township, Mailiao Township, and Baozhong Township in Yunlin County; Dapu Township, Zhongpu Township, Liujiao Township, Minxiong Township, Puzi City, Zhuqi Township, Meishan Township, Fanlu Township, Xinggang Township and Yizhu Township in Chiaoyi County; Zuozhen Township, Nanhua Township, Xinhua Township, Nanxi Township, Longqi Township, and Guanmiao Township in Tainan County; Dashu Township, Neimeng Township, Tianliao Township, and Alian Township in Kaohsiung County; Checheng Township, Laiyi Township, Chunri Township, Shizi Township, and Manzhou Township in Pingtung County; Sanxin Township, Wujie Township, Dongshan Township, Zhuangwei Township, Yilan city, Nanao Township, Toucheng Township, Jiaoxi Township and Suao Township in Yilan County; Zhuoxi Township and Xincheng Township in Hualien County; Dawu Township, Taimali Township, Taitung City, Chenggong Township, Chishang Township, Beinan Township, Donghe Township, Jingfeng Township, Changbing Township, Hairui Township, Luyeh Township, Daren Township, Guanshan Township and Ludao Township in Taitung County. The survey result showed that 9 townships and 24 villages had collected adult *Anopheles minimus* (Table 19 and Figure 15). Tuqi Village of Longqi Township in Tainan County had the highest density with the record of one single light trap catching 17.3 *Anopheles minimus* on average per night in August.

Table 19 The number of adult mosquitoes of *Anopheles minimus* collected in 2010

County / Township		*An. minimus* (No.)	Villages (No.)	Villages with *An. minimus*
Taitung County	Dawu	1	1	Shangwu
	Donghe	4	1	Xingchang
	Changbin	35	5	Zhuhu、Sanjian、Zhangyuan、Ningpu、Cyongpu
	Chenggong	4	1	Sanxian
	Beinan	36	1	Fushan
Tainan City	Longqi	87	6	Zhongkeng、Qiding、Nankeng、Daping、Tuqi、Shicao
	Zuozhen	9	5	Chengshan、Muguang、Ronghe、Ganglin、Guanghe
Kaohsiung City	Neimen	2	1	Neidong
Pingtung County	Checheng	42	3	Tongpu、Wenquan、Tianzhong
Total	**9 townships**	**220**	**24**	

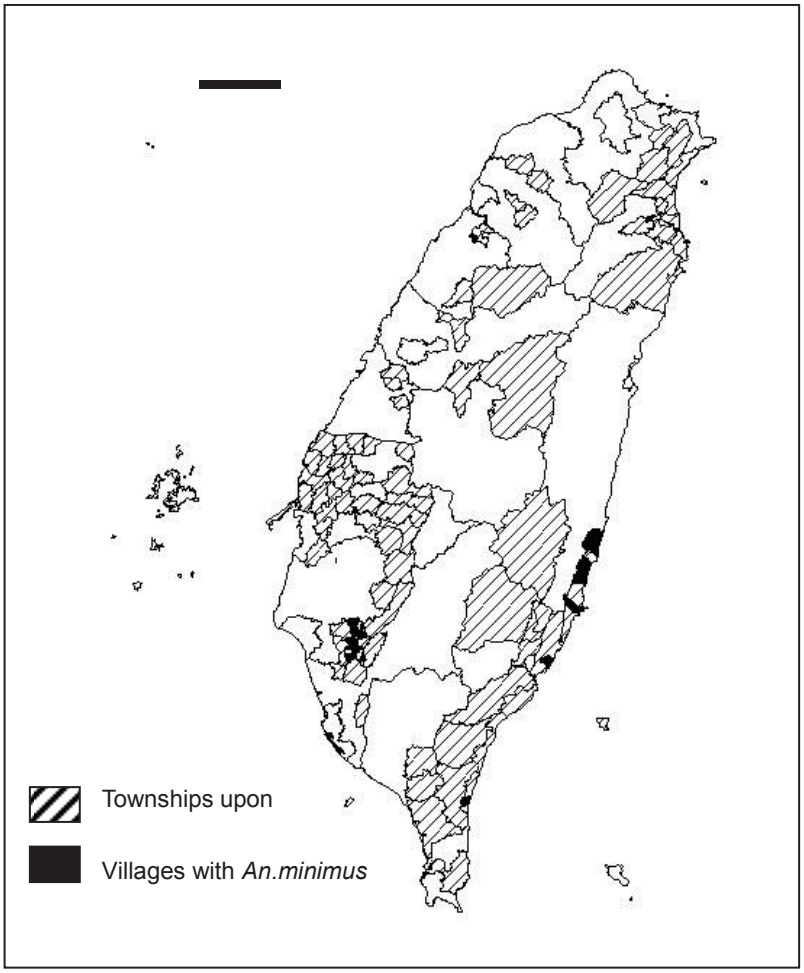


Figure 15 Distribution of *Anopheles minimus*, 2010

Symptom Surveillance System

I. Introduction

The outbreak of SARS in March of 2003 that swept the world also attacked Taiwan, which caused public panic and dealt our economy with an unprecedented blow. In December the same year, avian influenza also broke out in Korea, Japan and Vietnam. Presently Taiwan is the only country in Asia that has not become an avian flu stricken area. In Vietnam, Thailand and Cambodia, there have been fatality cases of humans infected with H5N1 virus, which attracted worldwide attention and concerns. For the sake of preventing the invasion of viruses, the symptom surveillance system has been constructed for early detection of communicable diseases so prompt control measures can be implemented. In 2006, the active surveillance system was consolidated into the symptom surveillance system to boost the capacity for prevention and control of imported diseases and improve the convenience and accessibility of the system so as to achieve the goals of early detection and early prevention. Currently the symptom surveillance system monitors: person under investigation for H5N1 influenza, influenza-like illness, fever of unknown origin, diarrhea, upper respiratory tract infection, patients with coughing lasting for more than three weeks and enterovirus.

II. Objectives of surveillance system

1. To strengthen surveillance of inbound travelers at airports and ports to achieve the purpose of fighting communicable diseases outside the country.
2. Effectively control cluster events and promptly start related prevention programs.

III. Reporting method and data analysis

Medical institutions (report person under investigation for H5N1 influenza and diarrhea only) or local health authorities report cases via the Internet directly by inputting data in the communicable disease case reporting system - symptom report system. Local health authorities, branches of CDC and relevant offices can download field data such as reports, submission of specimens and test results in the system through Business Objects (BO) for analysis.

IV. Description of reportable diseases

■ Person under investigation for H5N1 influenza:

1. Cases under investigation should meet one of the conditions below:
   (1) The following clinical conditions and epidemiological conditions should be met concurrently:

* Clinical conditions (one of the following conditions):
  - Meet the definition of influenza-like illness for reporting purpose (＊see definition of influenza-like illness in Point 2, Section 4 of this chapter).
  - Chest X-ray indicates pneumonia.
* Epidemiological conditions (persons with any of following exposure histories within 7 days before the onset of disease):
  - The person had contact with animals (or their excrement) or persons with suspected, probable or confirmed case of H5N1 influenza in Taiwan.
  - The person had been to an offshore area where a confirmed case of H5N1 flu had occurred in the past month or where a case of animal H5N1 flu had occurred in the past month and had contact with animals or livestock related places.
  - The person had been in a laboratory for experiments of influenza virus.

(2) Pneumonia patients with quick exacerbation of unknown origin.

(3) H5 subtype influenza virus patients confirmed by the central competent authority or its designated local competent authorities, medical service (affair) institutions, academic or research institutions carrying the test certificate of laboratory capacity.

2. Epidemic analysis of test results of specimens collected from persons under investigation for H5N1 influenza: A total of 18 cases were reported in 2009 and no cases were reported in 2010. All H5N1 test results of the reported cases were negative.

■ Influenza-like illness clustering

1. Case definition: Meet the definition of influenza-like illness for reporting purpose and with person, time and place relevance.
   * Definition of influenza-like illness for reporting purpose: the case should meet simultaneously the following three conditions:

(1) Sudden onset, with fever (ear temperature≧38℃) and respiratory tract infection;

(2) Muscular soreness or headache or extreme fatigue; and

(3) Simple runny nose, tonsillitis and bronchitis should be excluded.

2. Epidemic analysis of influenza-like illness clusters: In 2010, a total of 123 influenza-like illness clusters were reported. Clusters that were tested positive include 64 events of seasonal influenza virus type AH3, 14 events of 2009 pandemic influenza A (H1N1), 26 events of seasonal influenza virus type B, and 3 events of others (including 2 events of mixed infection of AH3 and 2009 pandemic influenza A (H1N1) and 1 event of mixed infection of AH3 and type B). The rest of reported events were tested negative or no specimen. Populous institutions had the highest incidence of influenza-like illness clusters, followed by schools, hospitals, military bases and others (including workplaces, families, camps, etc).

Table 20 Test results for influenza-like illness clustering incidents in 2010

Cluster No.	Test results					
	A (H3)	A [2009 pandemic influenza A (H1N1)]	B	*Others	Negative	No specimen
123	64	14	26	3	13	3

∗Others: including 2 events of mixed infection of seasonal influenza virus type AH3 and 2009 pandemic influenza A (H1N1) and 1 event of mixed infection of AH3 and seasonal influenza virus type B.

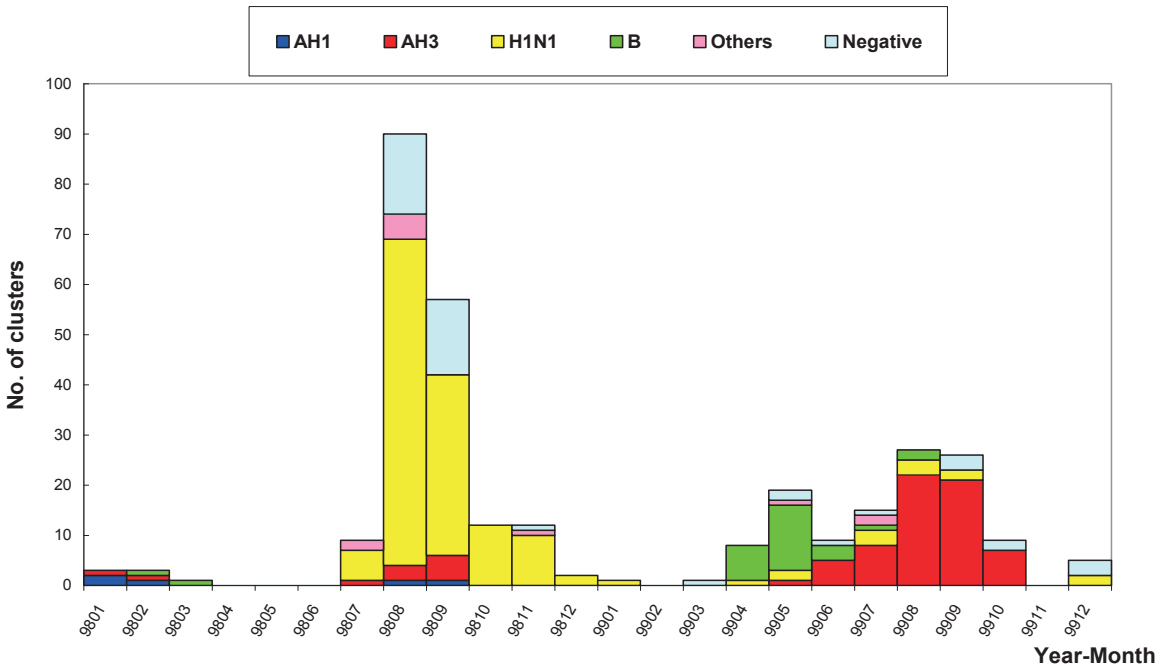


Figure 16 Evolutional trends of influenza-like illness clustering incidents in 2009-2010

Table 21 Distribution of clusters of influenza-like illness cases (by location) in 2010

Institution categories	Cluster No.
populous institutions	52
schools	34
hospitals	24
militaries	7
others	6
total	123

■ Diarrhea clustering

1. Case definition: Exclusion of intestinal cases with diarrhea associated with notifiable diseases or food poisoning; including cases with intestinal symptoms and with person, time and place relevance that are suspected as cluster infection with the concern of spreading.
2. Epidemic analysis of diarrhea clusters: In 2010, a total of 134 diarrhea clusters were reported. Clusters that were tested positive include 109 events of norovirus, 3 events of mixed infection of norovirus and rotavirus, 2 events of rotavirus, and 2 events of other pathogens (1 event of *Shigella* spp., and 1 event of mixed infection of *Staphylococcus aureus* and non-toxigenic *Vibrio cholerae*). The rest of the reported events were negative. Schools had the highest incidence of diarrhea clusters, followed by populous institutions, hospitals, others (including workplaces, families, camps, etc), and military bases.

Table 22 Test results for diarrhea clustering incidents in 2010

Cluster No.	Test results				
	Norovirus	Norovirus and Rotavirus	Rotavirus	*Others	Negative
134	109	3	2	2	18

∗Others: including 1 event of *Shigella* spp. infection and 1 event of mixed infection of *Staphylococcus aureus* and non-toxigenic *Vibrio cholerae*.

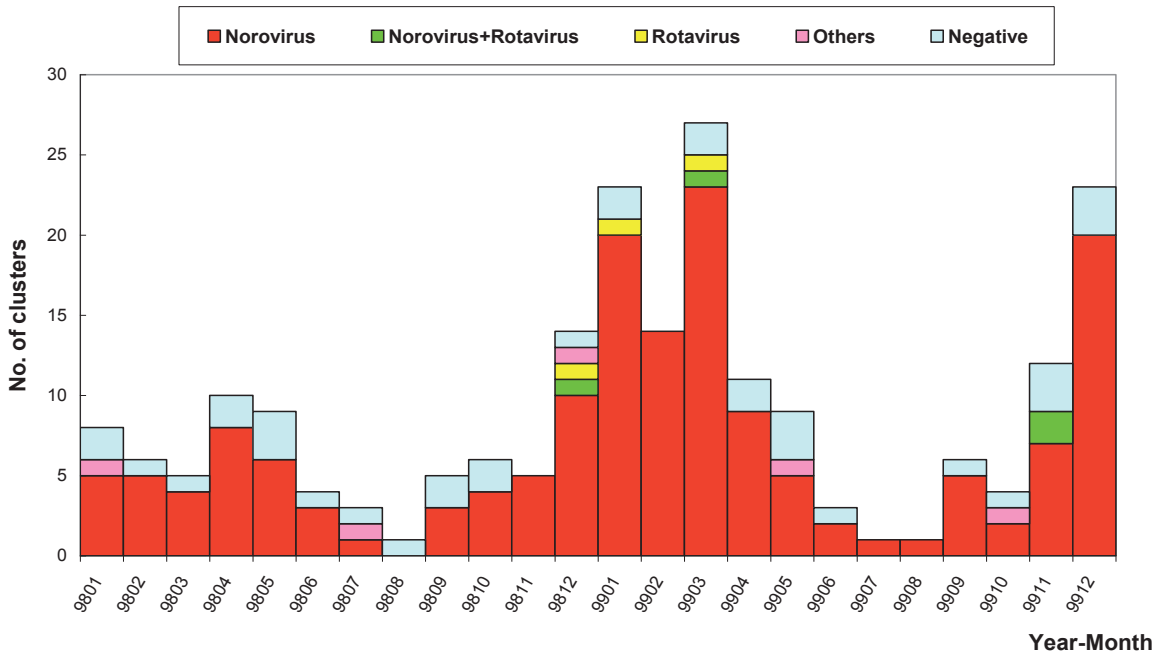


Figure 17 Evolutional trends of diarrhea clustering incidents in 2009-2010

Table 23 Distribution of clusters of diarrhea cases (by location) in 2010

Institution categories	Cluster No.
populous institutions	49
schools	55
hospitals	23
militaries	1
others	6
total	134

■ Upper respiratory tract infection (URI) clustering

1. Case definition: Cases with upper respiratory tract symptoms and with person, time and place relevance that are suspected as cluster infection with the concern of spreading.
2. Epidemic analysis of URI clusters: In 2010, a total of 76 URI clusters were reported. Clusters that were tested positive include 27 events of seasonal influenza virus type AH3, 2 events of 2009 pandemic influenza A (H1N1), 24 events of seasonal influenza virus type B, and 7 events of others (including 4 events of respiratory syncytial virus, 1 event of adenovirus, 1 event of mixed infection of seasonal influenza virus type AH3 and 2009 pandemic influenza A (H1N1), and 1 event of AH3 and seasonal influenza virus type B). The rest of the reported events were tested negative. Schools had the highest incidence of URI cluster, followed by populous institutions, hospitals, others (including workplaces, families, camps, etc), and military bases.

Table 24 Test results for upper respiratory tract infection clustering incidents in 2010

Cluster No.	Test results				
	A (H3)	A [2009 pandemic influenza A (H1N1)]	B	*Others	Negative
76	27	2	24	7	16

∗Others: Others include 4 events of respiratory syncytial virus, 1 event of adenovirus, 1 event of mixed infection of seasonal influenza virus type AH3 and 2009 pandemic influenza A (H1N1), and 1 event of mixed infection of AH3 and seasonal influenza virus type B.

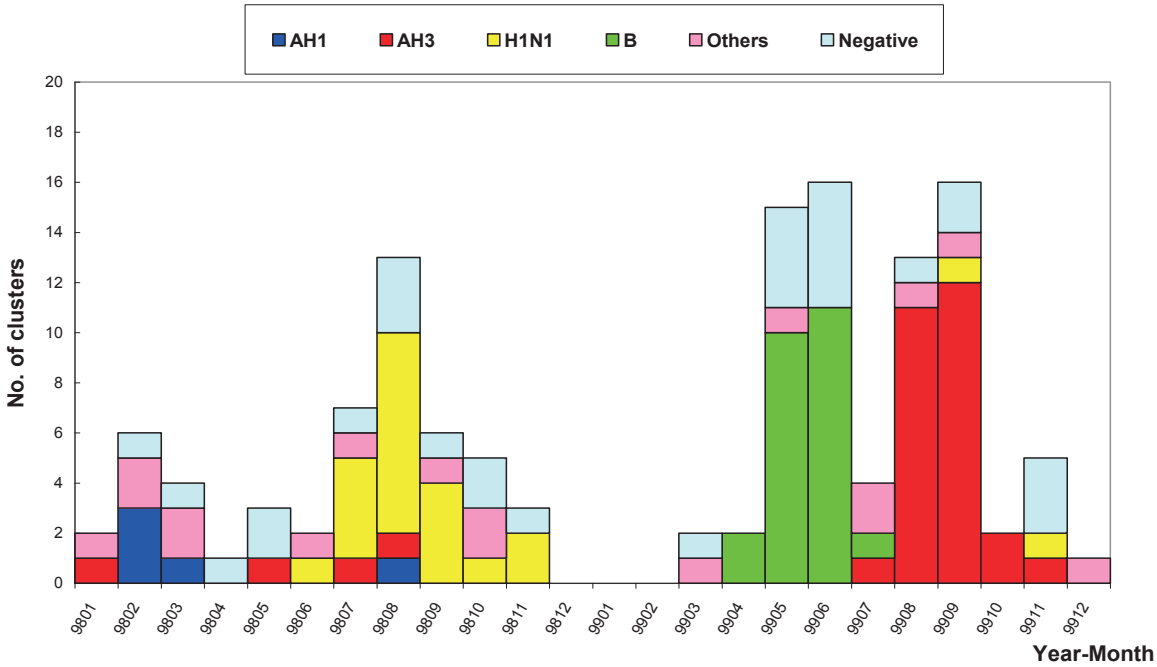


Figure 18 Evolutional trends of upper respiratory tract infection clustering incidents in 2009-2010.

Table 25 Distribution of clusters of upper respiratory tract infection cases (by location) in 2010

Institution categories	Cluster No.
populous institutions	26
schools	28
hospitals	12
militaries	4
others	6
total	76

■ Fever clustering of unknown origin

1. Case definition: Cases with fever symptoms of unknown origin and with person, time and place relevance that are suspected as cluster infection with the concern of spreading.
2. Epidemic analysis of fever of unknown origin clusters: In 2010, a total of 7 fever clusters of unknown origin were reported. Clusters that were tested positive include 3 events of seasonal influenza virus type B, 1 event of norovirus, 1 event of mixed infection of norovirus and salmonella, and 1 event of salmonella. The rest of the reported events were tested negative. Schools had the highest incidence of fever clusters of unknown origin (6 events), and the rest one event occurred in a tour group.

■ Clustering of patients with coughing lasting more than three weeks

1. Case definition: Cases with coughing lasting more than three weeks and with person, time and place relevance that are suspected as cluster infection with the concern of spreading.
2. Epidemic analysis of clusters of patients with coughing lasting more than three weeks: There were no clusters of patients with coughing lasting more than three weeks reported in 2010.

■ Enterovirus clustering

1. Case definition: Suspected cluster events that occur in places such as nurseries in hospitals, neonatal wards, baby care centers and homes of puerperal care where the individual cases or persons with whom individual cases were in contact with are in high risk groups of enteroviruses infection with severe complications.
2. Epidemic analysis of enterovirus clusters: In 2010, 3 enterovirus clusters were reported, of which, 1 was tested positive, while the rest were tested negative.

Real-time Outbreak and Diseases Surveillance System

I. Purpose of surveillance

More than 170 responsibility hospitals nationwide automatically transfer ICD-9-CM (International Classification of Diseases, Clinical Modification Ninth Revision) coded diagnostic information of patients seen on an emergency basis to Taiwan CDC through the "Real-time Outbreak and Disease Surveillance System (RODS)" for early and rapid analysis of diseases or syndromes.

The construction of the RODS system aims to detect early possible outbreak of an infectious disease in the communities, and discern the trends of an epidemic and predict the prevalence of a disease. The reportable diseases under RODS included influenza-like illness, enterovirus infection and diarrhea in 2007. The reportable diseases in 2008 and 2010 include the routine surveillance of conjunctivitis in addition to the reportable items in 2007.

II. Data analysis methods

About 170 hospitals in Taiwan provide daily real-time information of emergency patients via the Internet directly. The main fields of the report contain: patient's basic data, ID of reporting hospital, admission time, chief complaints, and ICD-9-CM medical diagnosis code. Taiwan CDC compiles and analyzes RODS data weekly, determines the trends in the prevalence of disease, and makes statistical charts for display on the website.

III. Findings

■ Enterovirus

Epidemic analysis:

Enterovirus infections are generally most prevalent between April and October each year in Taiwan. In 2010, Taiwan saw two peaks in enterovirus infection prevalence from May to June and from September to October. Based on the 2010 emergency enterovirus infection surveillance data, the permillage of enterovirus visits throughout the year ranged from 0.59‰ to 23.39‰, with the epidemic condition picking up starting in March and reaching its first peak of prevalence from the end of June to mid-July. Subsequently the epidemic slowed down and then reached another peak prevalence, which was slightly lower than the previous peak, between September and October. The overall trend of prevalence in 2010 is relatively apparent in comparison with 2009 (0.30‰ to 8.90‰). 【Note: permillage of enterovirus visits= (person-time of emergency room

enterovirus cases / total person-time of emergency room cases) *1000‰】

■ Influenza-like illness

Epidemic analysis:

In 2010, the percentage of influenza-like illness visits reported by emergence rooms ranged from 8.06% to 17.08%. The overall trend of prevalence in 2010 was milder in comparison with the surveillance figures in 2009 (7.41% to 33.32%) and is free of any apparent peak. 2009 instead had two flu seasons. The first one occurred in 2008 to early 2009, which peaked around the 5th week of 2009 (2009/1/31 to 2009/2/6). However the 5th week fell on the Chinese New Year holiday during which hospitals and clinics were closed. That was probably why percentage of influenza-like illness visits displayed an apparent peak. The second influenza season was the 2009 pandemic influenza A (H1N1) that started in July 2009, during which there were two apparent epidemic peaks.【Note: percentage of influenza-like illness visits = (person-time of emergency room influenza-like illness cases / total person-time of emergency room cases) *100%】

■ Acute diarrhea

Epidemic analysis:

In 2010, the percentage of acute diarrhea visits reported by emergence rooms ranged from 2.98% to 11.94%. The overall trend of prevalence in 2010 built up in comparison with the surveillance figures in 2009 (2.71% to 10.06%). Diarrhea epidemic typically reaches the peak of prevalence before and after the Chinese New Year. Based on the 7-day moving average of percentage of diarrhea visits, the surveillance trend rose gradually starting in December 2009 and peaked at the end of January 2010. There was a brief decline afterwards, but the 7-day moving average picked up again during the Chinese New Year holiday in the second half of February, which was the peak for 2010. After Chinese New Year, the overall epidemic condition declined steadily.【Note: percentage of acute diarrhea visits= (person-time of emergency room acute diarrhea cases / total person-time of emergency room cases) *100%】

■ Acute Hemorrhagic Conjunctivitis

Epidemic analysis:

In 2010, the permillage of acute hemorrhagic conjunctivitis visits reported by emergence rooms ranged from 0.55‰ to 10.24‰. The overall trend of prevalence throughout the year was relatively mild except for two brief peaks in the second half of February and upper half of July. In comparison with the surveillance figures in 2009 (permillage of visits ranged from 0.45‰ to 5.16‰), the 2010 showed an uptrend situation. The brief peaks of emergency room visits during the second half of February 2010 and from 2009/1/31 to 2009/2/6 were brought about by the closure of hospitals and clinics during the Chinese New Year holiday.【Note: permillage of acute hemorrhagic conjuncti vistis = (person-time of emergency room acute hemorrhagic conjunctivitis cases / total person-time of emergency room cases) *1000‰】

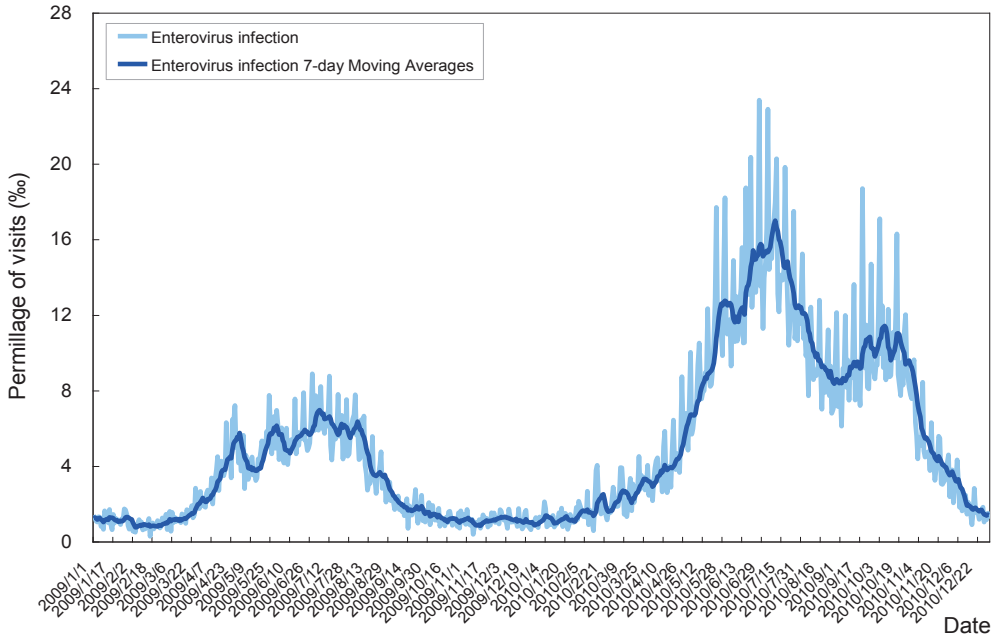


Figure 19 Emergency Department Daily Permillage of Enterovirus Visits & 7-day Moving Average

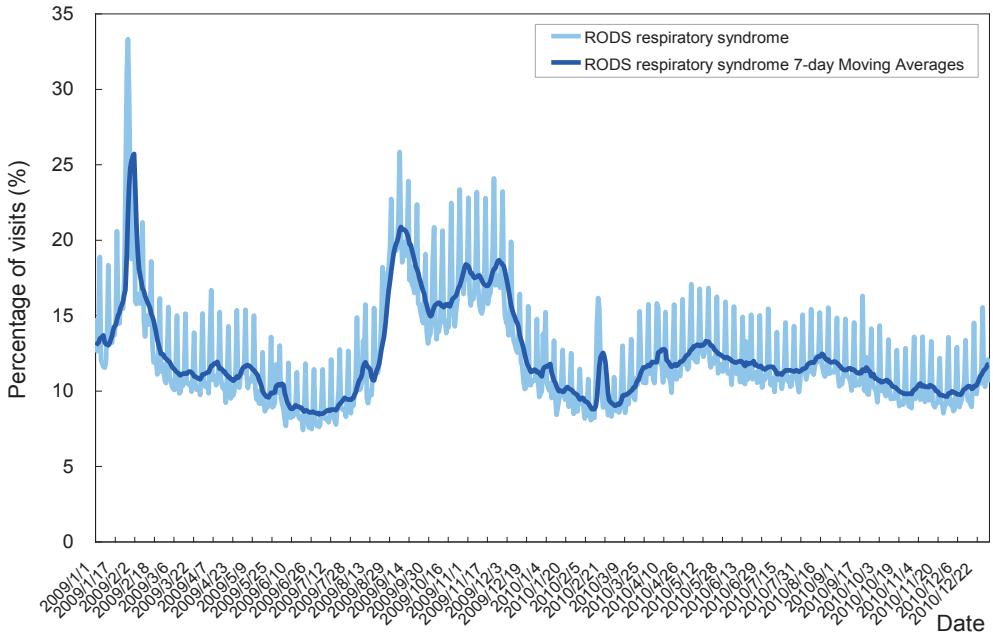


Figure 20 Emergency Department Daily Percentage of Respiratory Visits & 7-day Moving Average

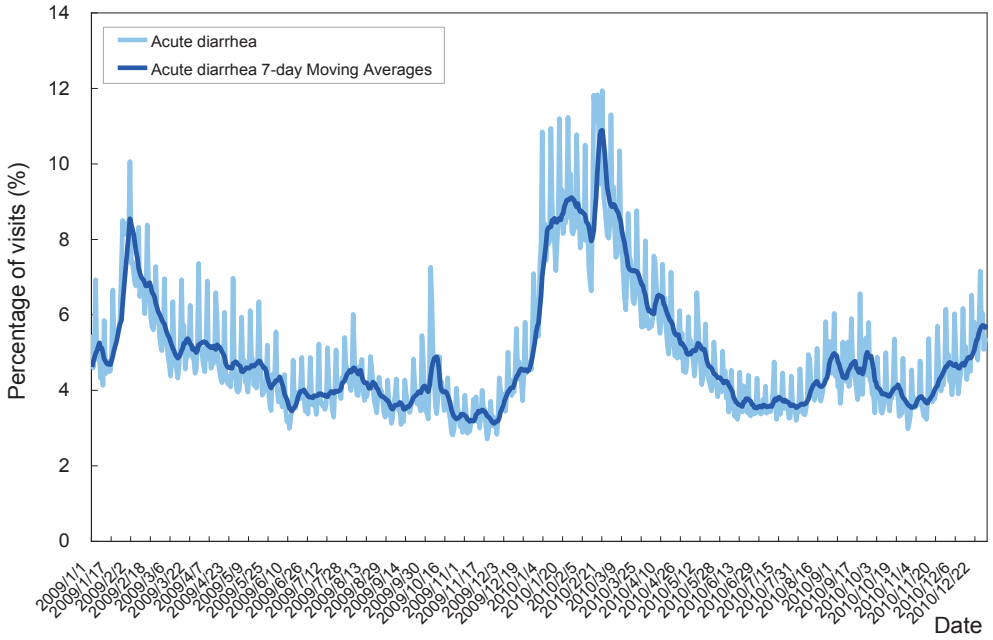


Fig 21 Emergency Department Daily Percentage of Acute Diarrhea Visits & 7-day Moving Average

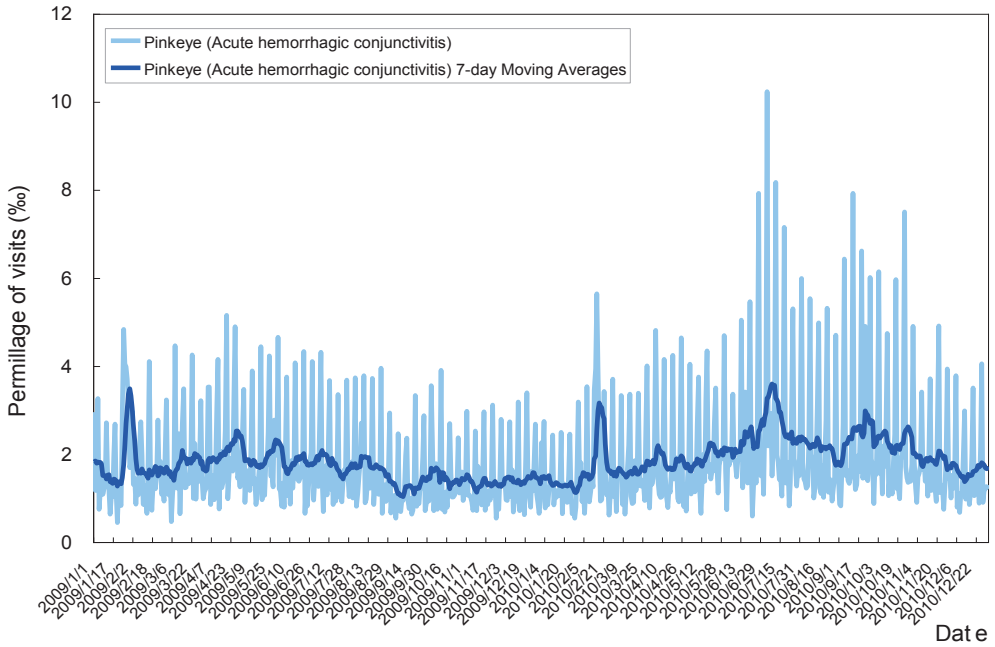


Fig 22 Emergency Department Daily Permillage of Acute Hemorrhagic Conjunctivitis Visits & 7-day Moving Average

Disease Surveillance using National Health Insurance Data

I. Introduction

To enhance Taiwan's surveillance capacity for specific diseases, Taiwan CDC and the Bureau of National Health Insurance (BNHI) embark on horizontal cooperation, under which, the BNHI compiles the outpatient, inpatient and emergency room data uploaded by hospitals and clinics through the National Health Insurance (NHI) IC cards. Taiwan CDC conducts daily, routine surveillance of specific diseases based on comprehensive and highly representative secondary statistical data to assess the magnitude of an epidemic condition.

II. Purpose of surveillance

The NHI data routine surveillance monitors commonly seen diseases in Taiwan, including influenza and enterovirus infection. Surveillance and analysis of NHI outpatient information helps grasp readily the state of an epidemic. This routine surveillance, together with the "Real-time Outbreak and Disease Surveillance System (RODS)", play the role of "mild symptoms surveillance" of influenza-like illness and enterovirus infection to undertake full assessment of epidemics and grasp the trends of prevalence.

III. Data analysis method

From the surveillance data received daily, Taiwan CDC fetchs representative ICD-9-CM (International Classification of Diseases, Clinical Modification, Ninth Revision) coded diagnostic data, include secondaray data as admission date,hospital locations, age groups, codes of outpatient/inpatient/emergency department and so on. Due to the bigger fluctuation seen in weekly inpatient/outpatient analytical results, the routine disease surveillance is carried out by calculating the 7-day moving average to obtain a relatively smooth prevalence curve.

IV. Findings

■ Influenza-like illness (ILI)

The number of daily influenza-like illness outpatient visits ranged from 300 to 15,000 person-times in 2010, which fell significantly in comparison with the number (ranged between 800 and 28,000 person-times) in 2009. Observing the trend of epidemic prevalence from the 7-day moving average curve of outpatient visits due to influenza-like illness, the overall epidemic condition of influenza-like illness was relatively mild in 2010 without an apparent peak. The period of 2/14 to 2/22 in 2010 was the Chinese New Year holiday during which hospitals and clinics were closed. Thus the number of outpatient visits dropped significantly during the period. In contrast, the number of outpatient visits due to influenza-like illness in 2009 rose gradually since August of 2009 due to 2009 pandemic influenza A (H1N1) epidemic and saw two epidemic waves thereafter which peaked between 2009/11/8 and 2009/11/28 (weeks 46-48 of the year). The number of outpatient visits due to influenza-like illness also fell significantly during 2009/1/25 and 2009/1/31 due to the closing of hospitals and clinics during the Chinese New Year holiday.

■ Enterovirus infections

The number of daily enterovirus outpatient visits ranged from 40 to 8,000 person-times in 2010, which rose significantly in comparison with the number of person-times (ranged between 30 and 2,500 person-times) in 2009. Observing the trend of epidemic prevalence from the 7-day moving average curve of outpatient visits due to enterovirus infection, there were two waves of epidemic in 2010. The number of outpatient visits (person-times) rose gradually since March of 2010 and peaked in mid-July before falling. The second wave started in early September and reached its peak in the first half of October. The highest number of outpatient visits during the second wave was slightly lower than that in the first wave. The number of outpatient visits then declined gradually starting in the second half of October. The prevalence of enterovirus infection in 2009 picked up since April. The number of outpatient visits peaked between 2009/6/28 and 2009/8/29 (weeks 27 to 35 of the year) and fell gradually starting from the end of August. The overall epidemic condition in 2009 was relatively mild in comparison with 2010, and unlike 2010, lacked apparent peaks.

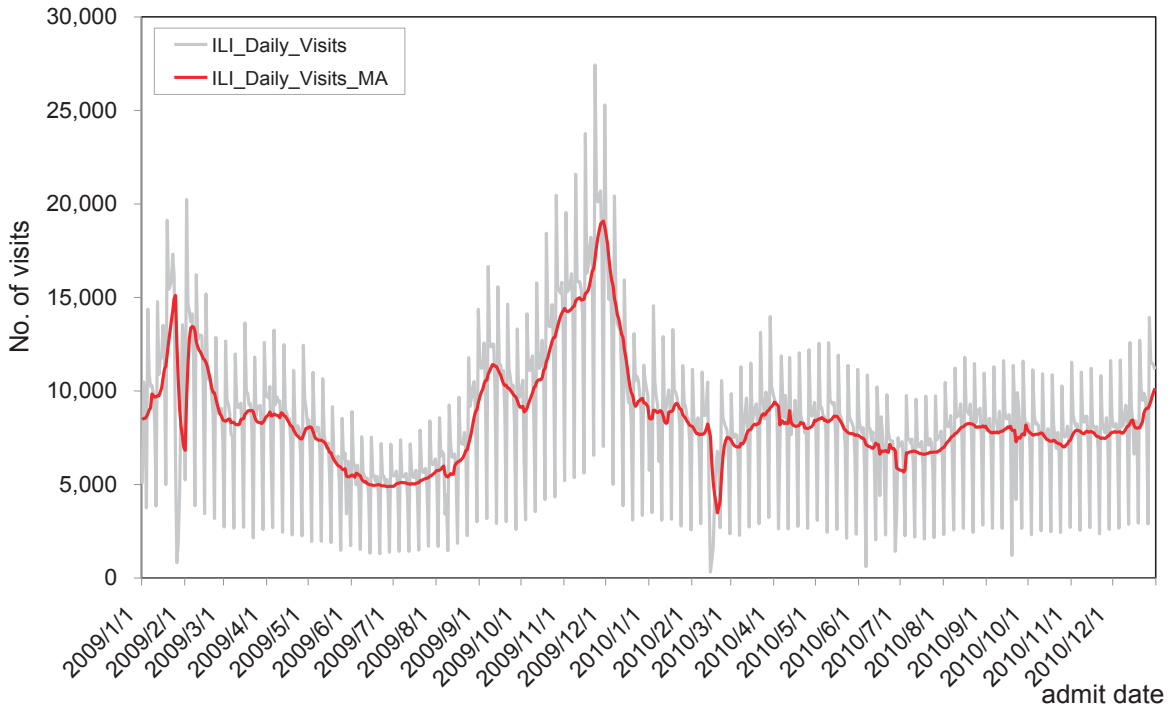


Figure 23 Daily influenza-like illness visits and the 7-day moving average trend (January 1~December 31, 2010)

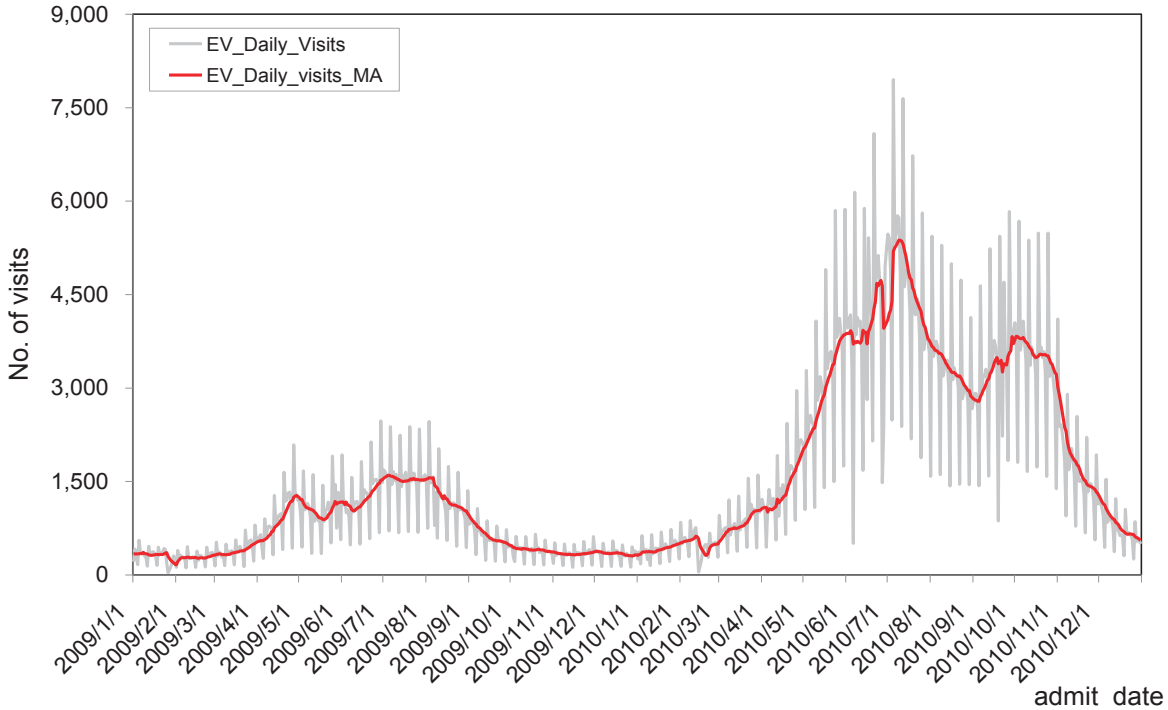


Figure 24 Daily enterovirus visits and the 7-day moving average trend (January 1~December 31, 2010)

Pneumonia and Influenza Mortality Surveillance

I. Introduction

Starting in April 2009, many parts of the world reported the outbreak of 2009 pandemic influenza A (H1N1). Soon after the World Health Organization (WHO) announced the case definition of 2009 pandemic influenza A (H1N1) on April 26, 2009, Taiwan categorized it as a Class 1 notifiable communicable disease on April 27 for epidemic surveillance purpose. Subsequently because the majority of 2009 pandemic influenza A (H1N1) cases had only mild symptoms, the WHO branded the flu outbreak as a “mild pandemic.” Thus Taiwan removed it from Class 1 notifiable communicable diseases on June 19. From then on, cases of 2009 pandemic influenza A (H1N1) with severe complications are handled as a Class 4 notifiable communicable disease in terms of reporting deadline, reporting and relevant control measures.

Influenza surveillance in the U.S. for example includes virus surveillance, outpatient surveillance, mortality surveillance, hospitalization surveillance and geographic distribution of influenza virus. The mortality surveillance consists of two parts. One is the 122 cities mortality reporting system, which provides weekly reports of the total number of death certificates that list pneumonia and influenza (P&I) as a potential cause or cause of death. The other is influenza related deaths among children <18 years to achieve the purpose of fast tracking.

In rapid response to real-time surveillance and early warning , Taiwan CDC works with the Statistics Office of the DOH to analyze deaths attributed to P&I via the National Death Certificate System every day in order to monitor and command the trends of P&I related deaths.

II. Purpose of surveillance

Pneumonia is a common complication of influenza infection. The great majority of influenza mortality is caused by secondary bacterial or viral pneumonia. Thus pneumonia should be included in influenza related mortality surveillance for analysis. The P&I surveillance system established in response to the 2009 pandemic influenza A (H1N1) epidemic buttresses the CDC’s influenza prevention and control network together with the existing Real-Time Outbreak and Disease Surveillance System and NHI Inpatient/Outpatient Information, Laboratory Surveillance and investigation of severe complicated influenza cases to cover surveillance in four dimensions (mortality, mild cases, virology and hospitalization). It is hope that with routine operations in these four surveillance aspects in place, Taiwan CDC can firmly grasp the trends and variations in influenza epidemic to achieve the objectives of early warning and real-time surveillance.

III. Data analysis method

Taiwan CDC conducts weekly surveillance of P& I mortality by searching the field of “cause of death” with keywords “pneumonia, common cold or flu” in combination with cause of death determination rules. Due to the bigger fluctuation seen in weekly P&I mortality data, routine surveillance is carried out by using the curve graphed with the 4-week moving average values that include the current week and the preceding three weeks to obtain better data stability and remove wide fluctuation.

IV. Findings

Based on the P&I mortality surveillance data of Taiwan CDC, the weekly deaths from P&I ranged between 200 to 310 in 2010. In observation of the 4-week moving average of P&I death prevalence curve, it is found that the overall mortality trends were relatively smooth without apparent peaks of prevalence in 2010, except the number of deaths is slightly higher than that in 2009. The weekly deaths from P&I in 2009 ranged between 180 and 380. The 2009 4-week moving average of P&I death prevalence curve shows that the number of P&I deaths began to rise from the end of 2008 and peaked on the 6th week of 2009, and gradually slowed down starting from the 14th week of 2009. If analyzed by age group, the highest P&I rate in 2010 occurred in 65 years and over age group, accounting for 86.9% of the surveillance data. The phenomenon was the same as in 2009, during which 65 years and over age group accounted for 87.0% of total P&I deaths in the year, which is similar to that in 2010.

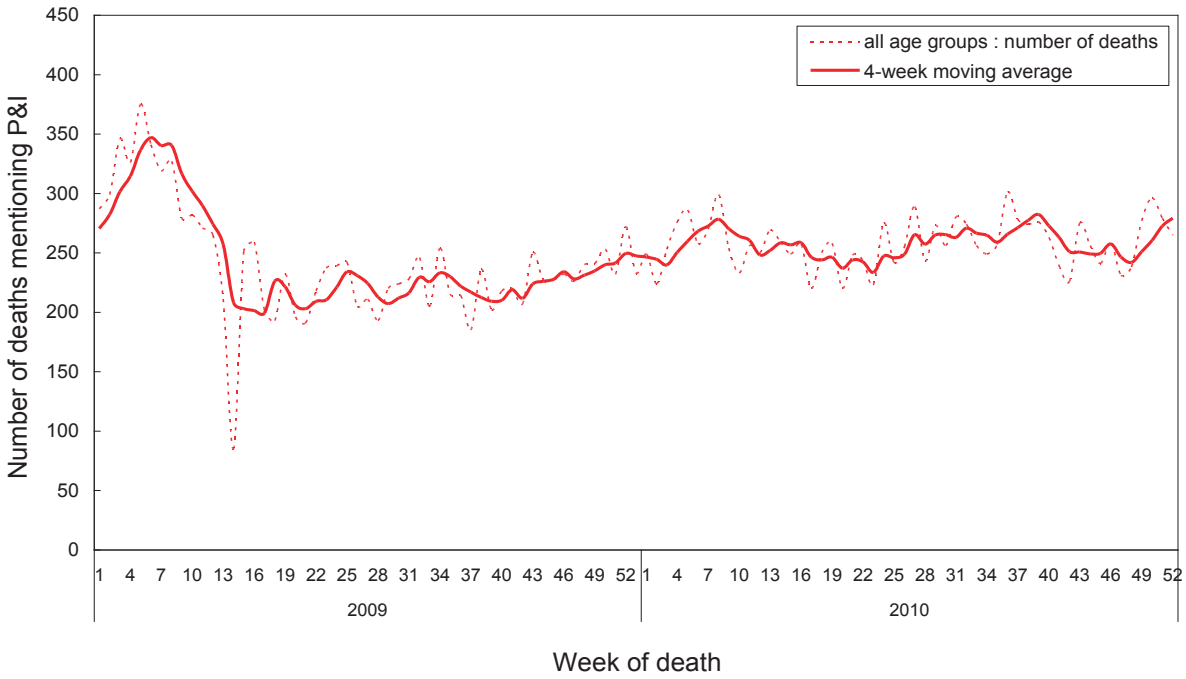


Figure 25 The surveillance trend of pneumonia and influenza mortality

III Surveillance Reports of Selected Diseases

—Republic of China (Taiwan), 2010

◎Abbreviations and Symbols Used in Table

— No reported cases.

… Not under surveillance.

Measles

In 2010, 12 cases of measles (incidence rate: 0.05 per 100,000 population) were confirmed, which went down as compared with 48 confirmed cases (incidence rate: 0.21 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 5 male cases (41.7%) and 7 female cases (58.3%) with male to female ratio of 0.7:1.0.

(2) By age group

There were 5 cases in 25-39 years age group, 3 cases in 15-24 years age group, 2 cases in 1-4 years age group (all cases involved patients of one year old), 1 case in 5-14 years age group, and 1 case in 0-1 year age group (7 months).

(3) By month

There were 4 cases in June, 2 cases each in March, April and May, and 1 case each in February and July.

(4) By residential region

Taipei City ranked the first with 5 confirmed cases, followed by 2 cases in Taipei County, Taichung County, and Kaohsiung County respectively, and 1 case in Hsinchu County.

The incidence rate of confirmed cases per 100,000 population was the highest in Hsinchu County (0.20), followed by Taipei City (0.19), and Kaohsiung County (0.16).

(5) Imported cases and countries of infection

There were 6 imported cases of measles in 2010, including 3 cases each from Philippines and Vietnam.

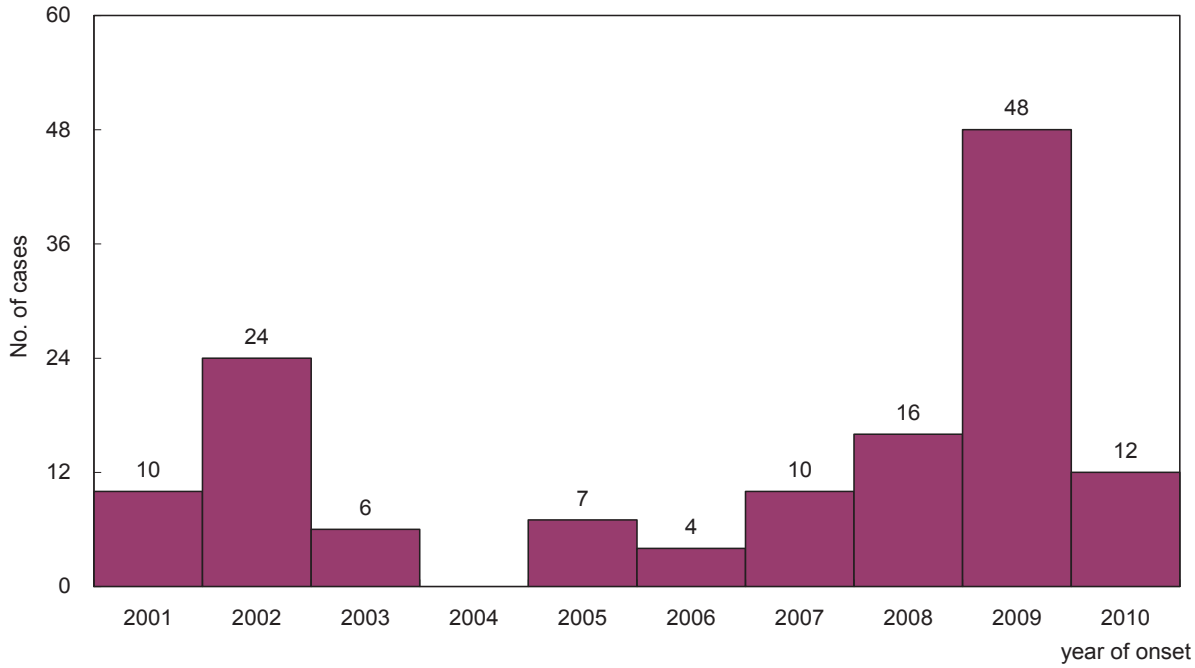


Figure 26 Number of Measles confirmed cases, 2001-2010

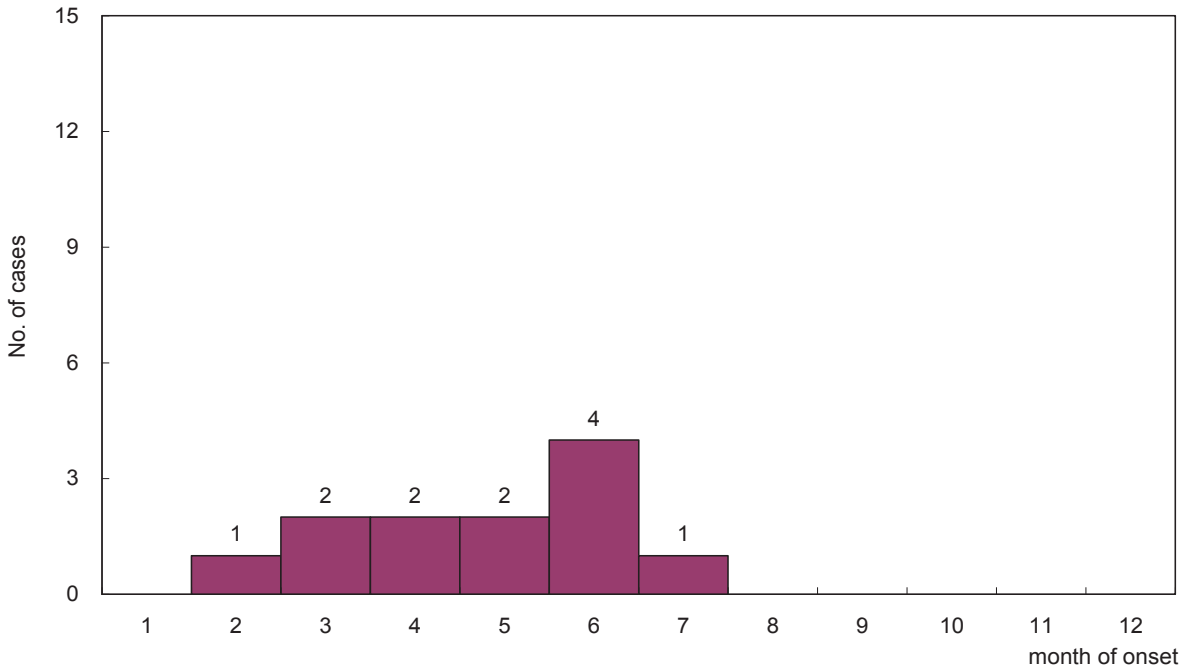


Figure 27 Number of Measles confirmed cases, 2010

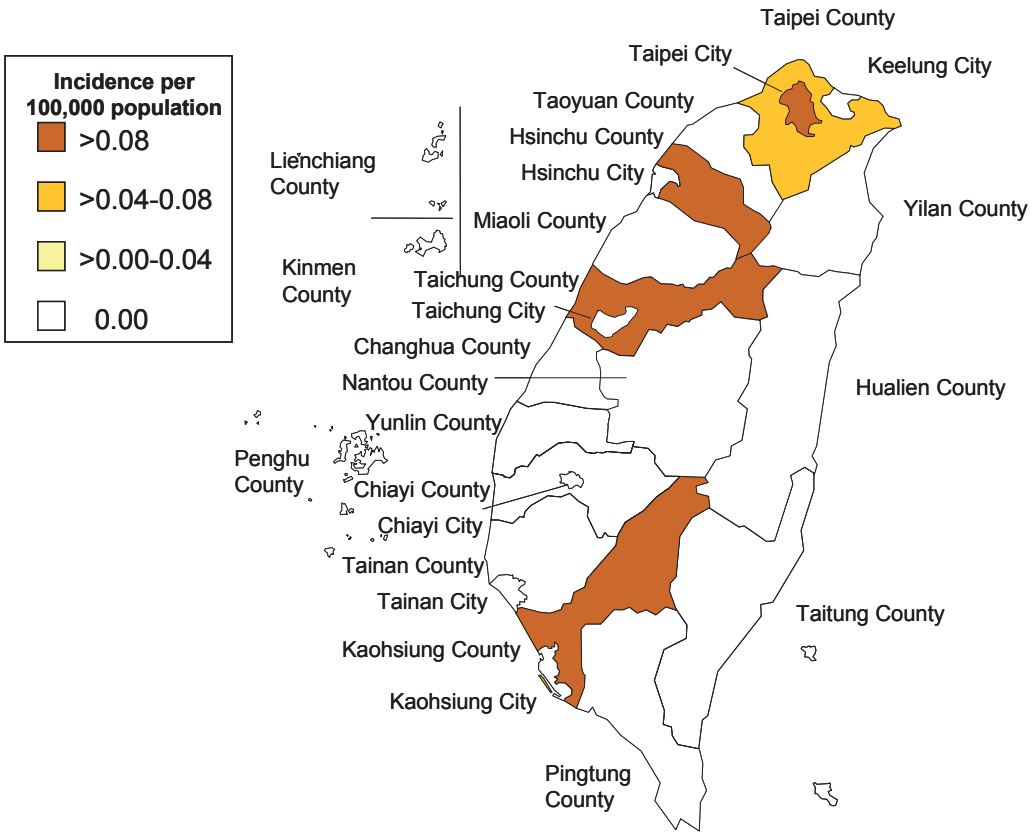


Figure 28 Geographical distribution by incidence of Measles confirmed cases, 2010

Pertussis

In 2010, 61 cases of pertussis (incidence rate: 0.26 per 100,000 population) were confirmed, which went down as compared with 90 confirmed cases (incidence rate: 0.39 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 34 male cases (55.7%) and 27 female cases (44.3%) with male to female ratio of 1.3:1.0.

(2) By age group

There were 24 cases in 0-1 year age group, 10 cases each in 5-14 and 25-39 years age groups, 8 cases in 1-4 years age group, 6 cases in 40-64 years age group, and 3 cases in 15-24 years age group.

Of the 24 cases in 0-1 year age group, 5 cases were 2 months old, 4 cases each were less than 1 month old, 1 month old and 3 months old, 3 cases each were 4 months old and 5 months old, and 1 case was 6 months old.

(3) By month

There were 12 confirmed cases in March, 11 cases in April, 8 cases in May, 6 cases each in February and July, 5 cases each in August and December, 3 cases in June, 2 cases each in September and November, and one case in October.

(4) By residential region

Confirmed cases were occurred in 13 cities and counties. Among them, Taipei City and Taipei County ranked the first with both 21 cases, followed by 4 cases each in Taichung City and Hualien County, 3 cases in Yilan County, and 1 case in Taoyuan County, Hsinchu County, Taichung County, Changhua County, Nantou County, Taitung County, Penghu County, and Lienchiang County respectively.

The incidence rate of confirmed cases per 100,000 population was the highest in Lienchiang County (10.07), followed by Hualien County (1.18), and Penghu County (1.04).

(5) Imported cases and countries of infection

There were no imported cases of pertussis in 2010.

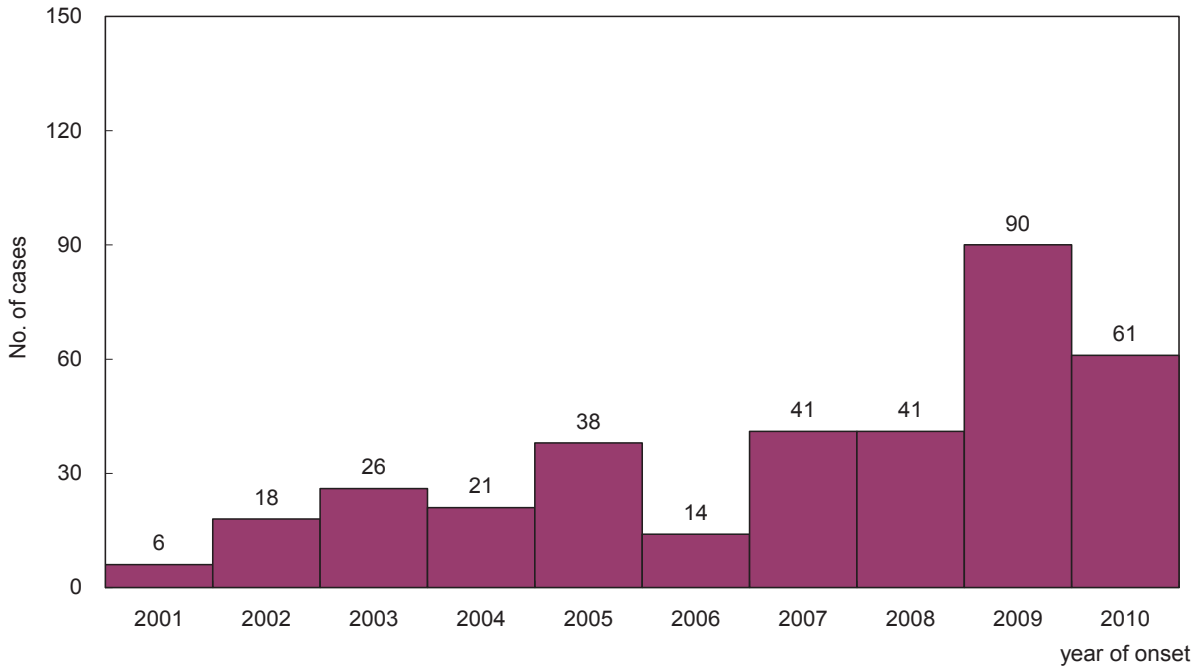


Figure 29 Number of Pertussis confirmed cases, 2001-2010

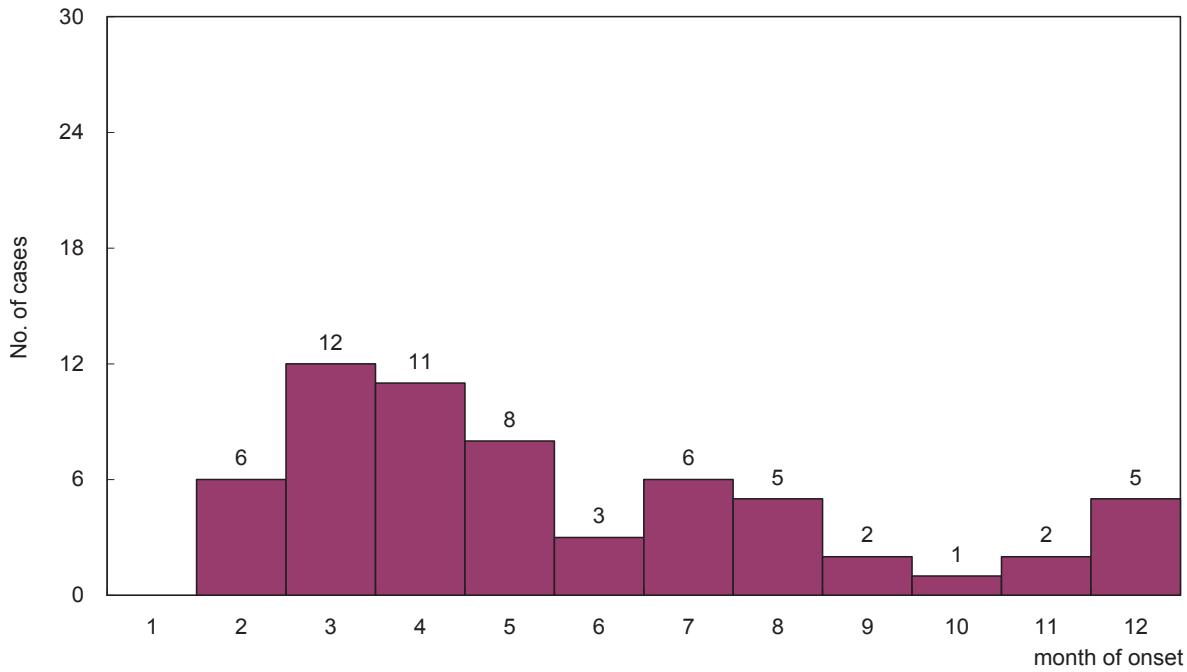


Figure 30 Number of Pertussis confirmed cases, 2010

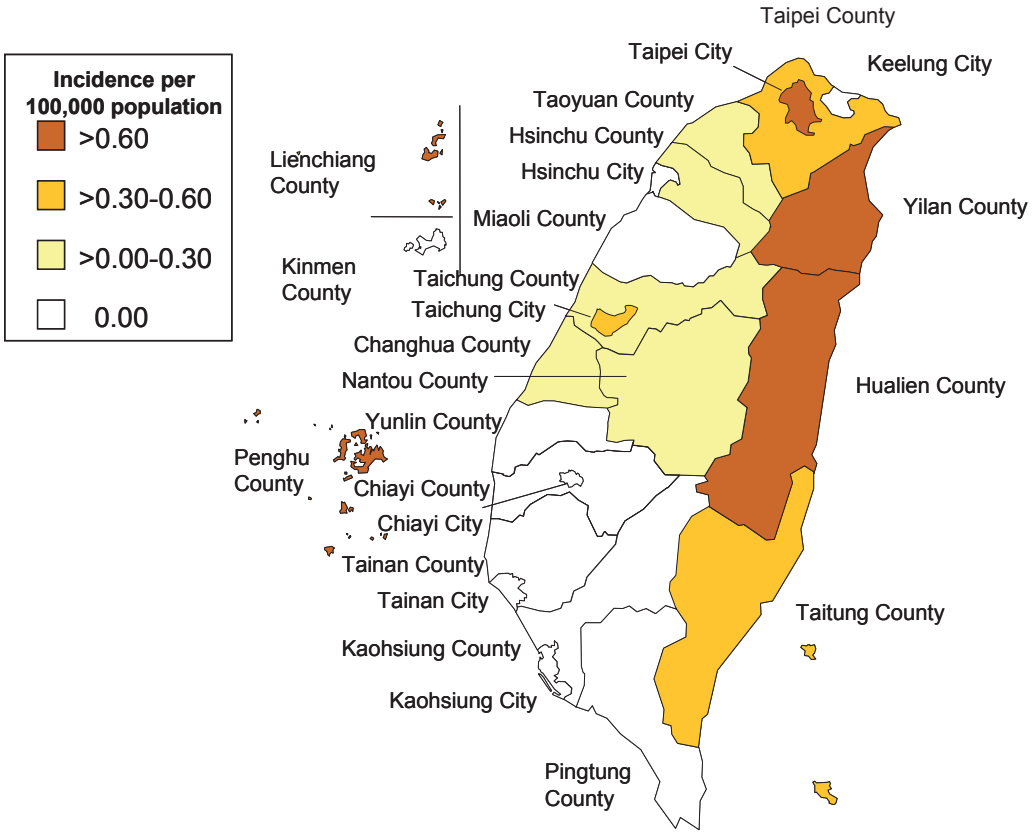


Figure 31 Geographical distribution by incidence of Pertussis confirmed cases, 2010

Meningococcal Meningitis

In 2010, 7 cases of meningococcal meningitis (incidence rate: 0.03 per 100,000 population) were confirmed, which went up as compared with 2 confirmed cases (incidence rate: 0.01 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 5 male cases (71.4%) and 2 female cases (28.6%) with male to female ratio of 2.5:1.0.

(2) By age group

There were 3 cases in 25-39 years age group, and 1 case each in 0-1, 1-4, 15-24, and 65 years and over age groups.

(3) By month

There were 2 confirmed cases in July and 1 case each in January, April, June, October and November.

(4) By residential Region

Taipei County ranked the first with 2 confirmed cases, followed by 1 case in Taoyuan County, Taichung County, Tainan County, Kaohsiung County, and Yilan County respectively, and no confirmed cases occurred in other cities and counties.

The incidence rate of confirmed cases per 100,000 population was the highest in Yilan County (0.22), followed by Tainan County (0.09), and Kaohsiung County (0.08).

(5) Imported cases and countries of infection

There were no imported cases of meningococcal meningitis in 2010.

(6) By serogroup

According to the laboratory testing results, 6 cases were infected with *Neisseria meningitidis* serogroup B, and 1 case was undetermined.

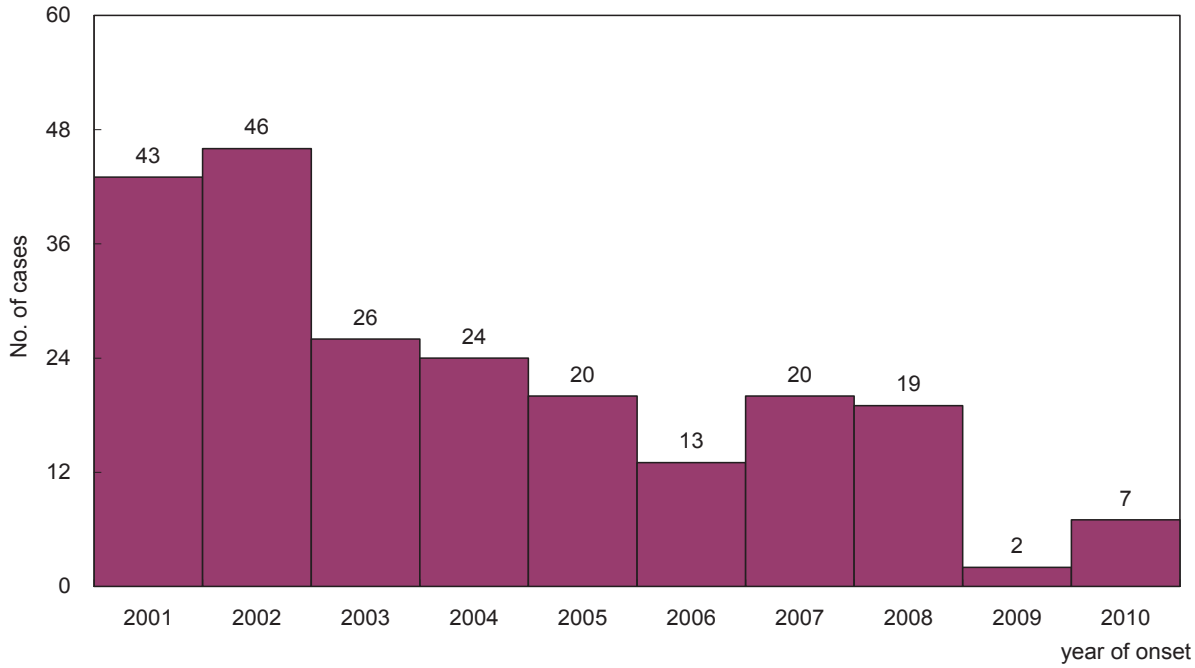


Figure 32 Number of Meningococcal Meningitis confirmed cases, 2001-2010

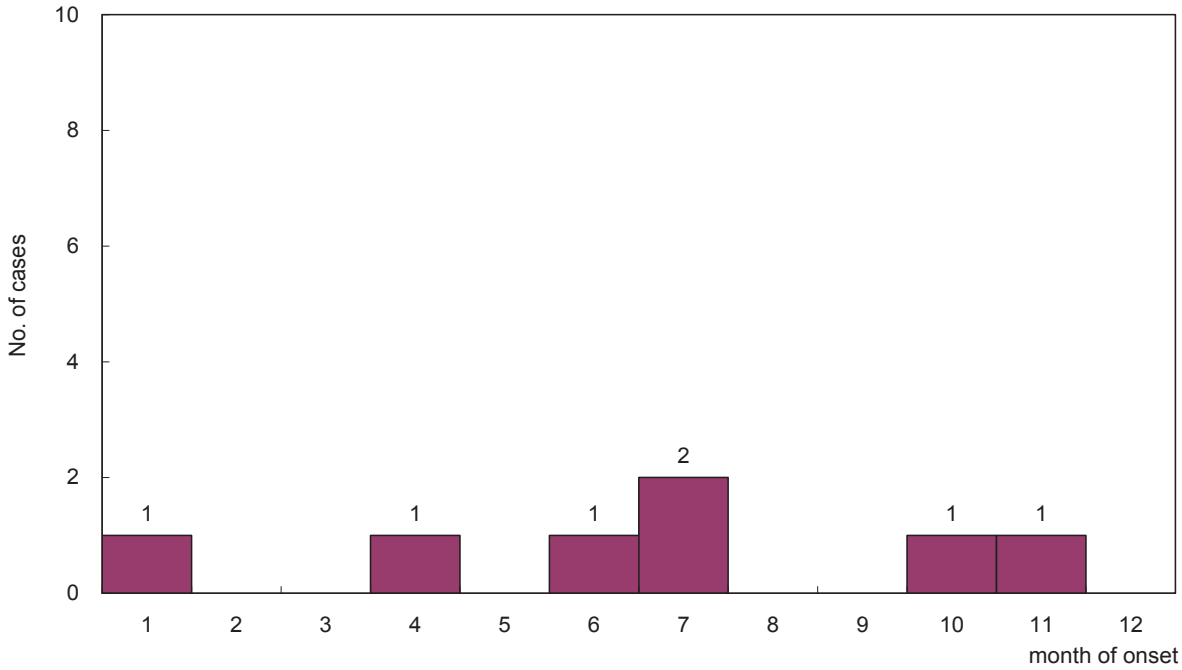


Figure 33 Number of Meningococcal Meningitis confirmed cases, 2010

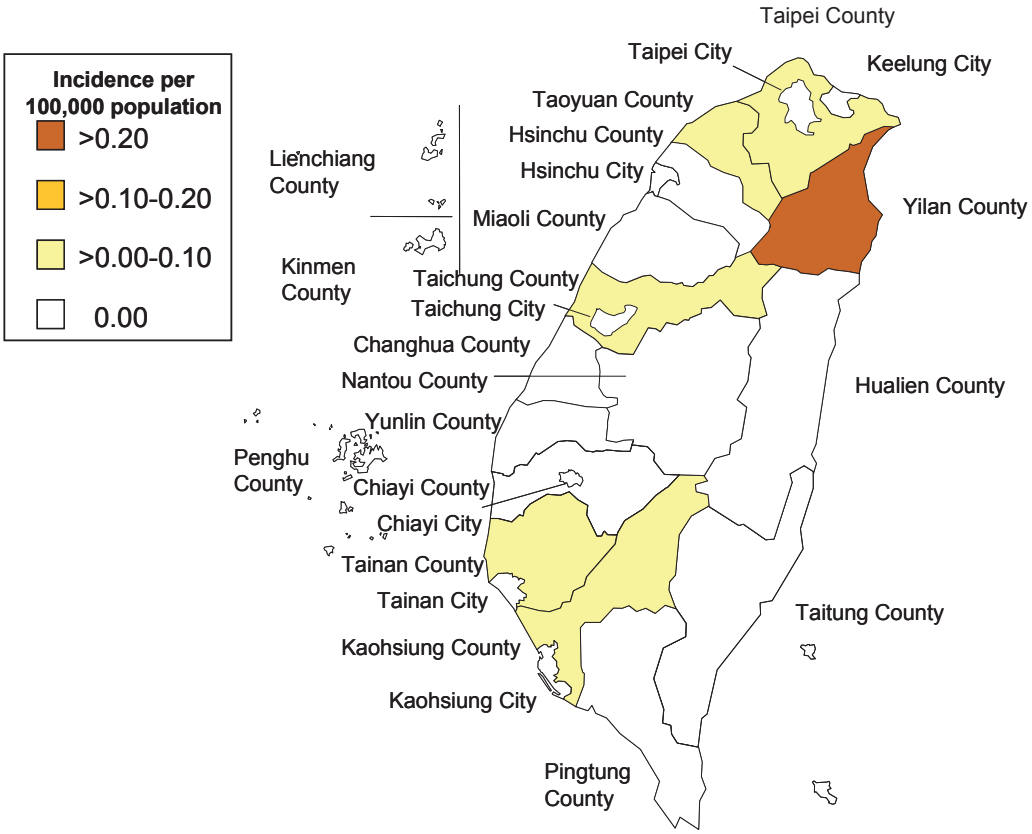


Figure 34 Geographical distribution by incidence of Meningococcal Meningitis confirmed cases, 2010

Japanese Encephalitis

In 2010, 33 cases of Japanese encephalitis (incidence rate: 0.14 per 100,000 population) were confirmed, which went up as compared with 18 confirmed cases (incidence rate: 0.08 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 22 male cases (66.7%) and 11 female cases (33.3%) with male to female ratio of 2.0:1.0.

(2) By age group

By age group, there were 17 cases in 40-64 years age group, 9 cases in 25-39 years age group, 4 cases in 65 years and over age group, 2 cases in 15-24 years age group, and 1 case in 1-4 years age group.

(3) By month

The cases occurred mostly in summer seasons, with 14 cases in June, 13 cases in July, 2 cases each in May and August and 1 case each in September and November.

(4) By residential Region

Changhua County and Pingtung County ranked the first with both 4 confirmed cases, followed by 3 cases each in Taipei County and Tainan County, 2 cases each in Taipei City, Taoyuan County, Miaoli County, Yunlin County, Chiayi County, and Hualien County, 1 case in Taichung City, Taichung County, Tainan City, Kaohsiung City, Kaohsiung County, Yilan County, and Taitung County respectively, and no confirmed cases occurred in the rest of cities and counties.

The incidence rate of confirmed cases per 100,000 population was the highest in Hualien County (0.59), followed by Pingtung County (0.46), and Taitung County (0.43).

(5) Imported cases and countries of infection

There was 1 imported case of Japanese encephalitis from China in 2010.

(6) By clinical symptoms

Among the confirmed cases, 30 cases had fever, 21 cases had unconsciousness, 19 cases had headache, 12 cases were comatose, 11 cases had nausea or vomiting, 5 cases had convulsion or muscle ache, and 3 cases had stiff neck or joint pain.

(7) Dwelling or neighborhood environment

Among the confirmed cases, 8 cases lived nearby pig farms, 14 cases lived nearby pigeon farms, 17 cases lived nearby paddy fields, 9 cases lived nearby duck or poultry farms, 2 cases lived nearby goat farm, 1 case lived nearby egrets nest, 1 case had pets at home, and 3 cases lived nearby ponds.

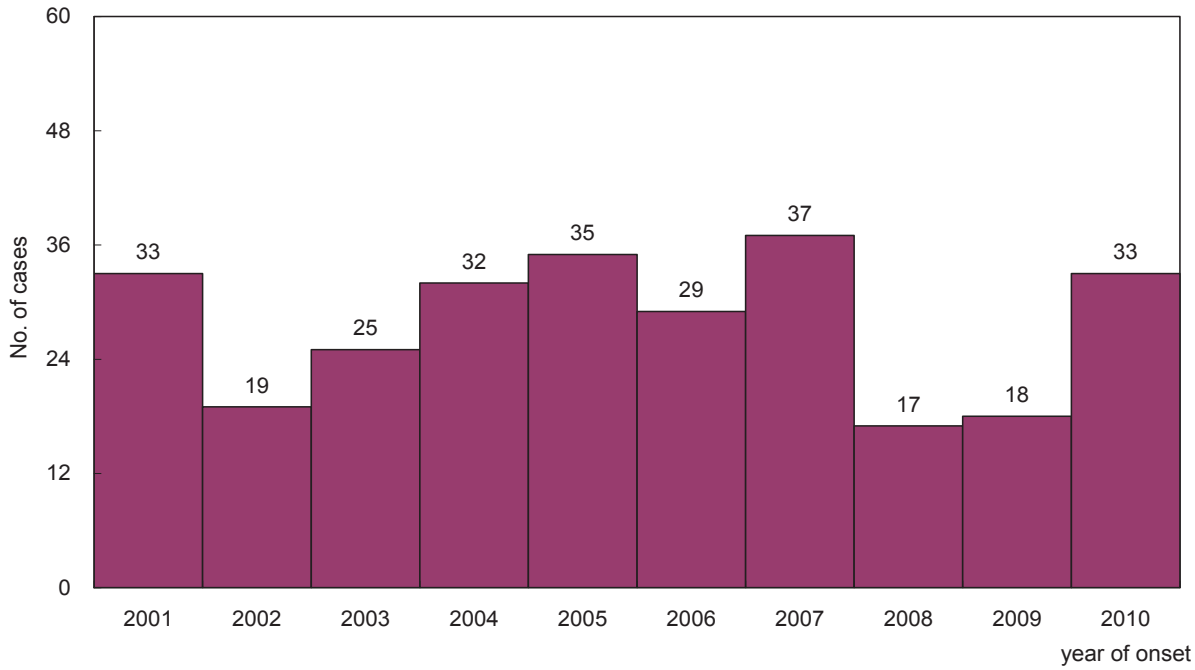


Figure 35 Number of Japanese Encephalitis confirmed cases, 2001-2010

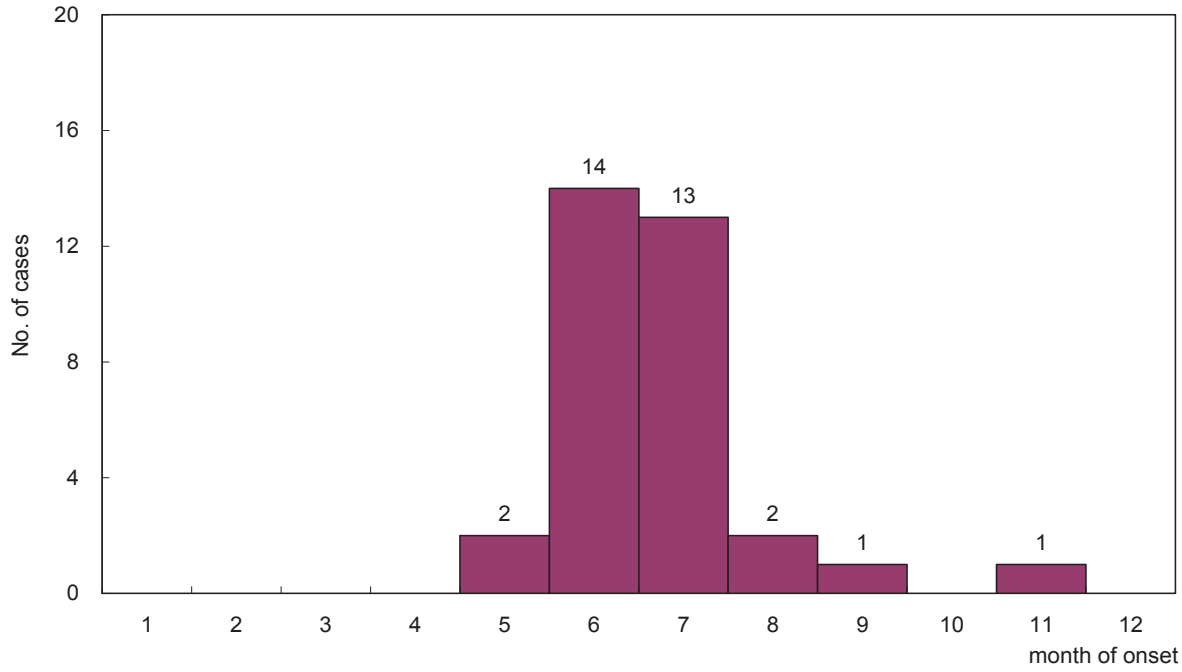


Figure 36 Number of Japanese Encephalitis confirmed cases, 2010

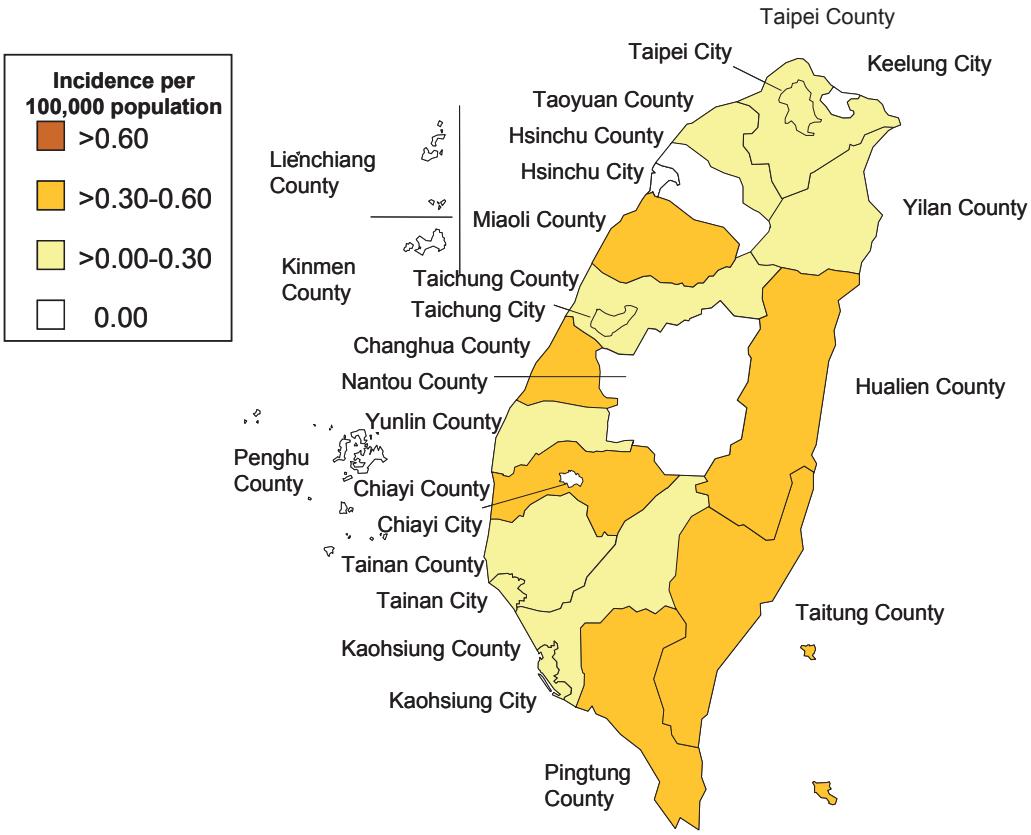


Figure 37 Geographical distribution by incidence of Japanese Encephalitis confirmed cases, 2010

Acute Hepatitis A

In 2010, 110 cases of acute hepatitis A (incidence rate: 0.48 per 100,000 population) were confirmed, which went down as compared with 234 confirmed cases (incidence rate: 1.01 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 62 male cases (56.4%) and 48 female cases (43.6%) with male to female ratio of 1.3:1.0.

(2) By age group

There were 49 cases (44.5%) in 25-39 years age group, 22 cases (20.0%) in 40-64 years age group, 20 cases (18.2%) in 15-24 years age group, 10 cases (9.1%) in 65 years and over age group, 7 cases (6.4%) in 5-14 years age group, and 2 cases (1.8%) in 1-4 years age group.

(3) By month

January had the most confirmed cases with 33 cases occurred, followed by 13 cases in February, 10 cases in June, 8 cases each in August, October and November, 7 cases each in March and September, 5 cases each in July and December, and 3 cases each in April and May.

(4) By residential region

Taipei County ranked the first with 23 confirmed cases (20.9%), followed by 15 cases (13.6%) in Taoyuan County, 12 cases (10.9%) in Taipei City, 7 cases each in Miaoli County and Taichung City, 6 cases in Taichung County, Tainan City, Kaohsiung City and Kaohsiung County respectively, and 5 cases in Hsinchu County. The other cities and counties all had less than 5 cases, in which Yunlin County, Chiayi City, Yilan County, Hualien County, Kinmen County and Lienchiang County had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Miaoli County (1.25), followed by Penghu County (1.04), and Hsinchu County (0.98).

(5) Imported cases and countries of infection

There were 15 imported cases of acute hepatitis A in 2010, including 2 cases each from China, Vietnam and Myanmar, and 1 case each from Japan, Cambodia, Philippines, Thailand, Malaysia, Germany, Egypt, Paraguay, and United Arab Emirates.

(6) Clinical symptoms

An epidemiological survey of 110 confirmed cases showed that in cases with symptoms (multiple answers are allowed), 79.1% (87 person-times) had tiredness, 76.4% (84 person-times) had tawny urine, 69.1% (76 person-times) had yellowing of the white of the eye or skin, 60% (66 person-times) had nausea, 57.3% (63 person-times) had stomach discomfort, 51.8% (57 person-

times) had fever, and 37.3% (41 person-times) had abdominal pain.

(7) Source of drinking water and dietary habits

The epidemiological survey of 110 confirmed cases showed that the major sources of residential drinking water (multiple answers are allowed) are tap water which accounted for 75.5% (83 person-times), packaged water which accounted for 14.5% (16 person-times); in addition, spring water accounted for 4.5% (5 person-times), and groundwater accounted for 1.8% (2 person-times). As for dietary habits (multiple answers allowed), taking food at snack booths accounted for the largest percentage, accounting for 42.7% (47 person-times), followed by taking nutritional lunch or take-out lunch box accounting for 30% (33 person-times), and dinner party in restaurants accounting for 23.6% (26 person-times).

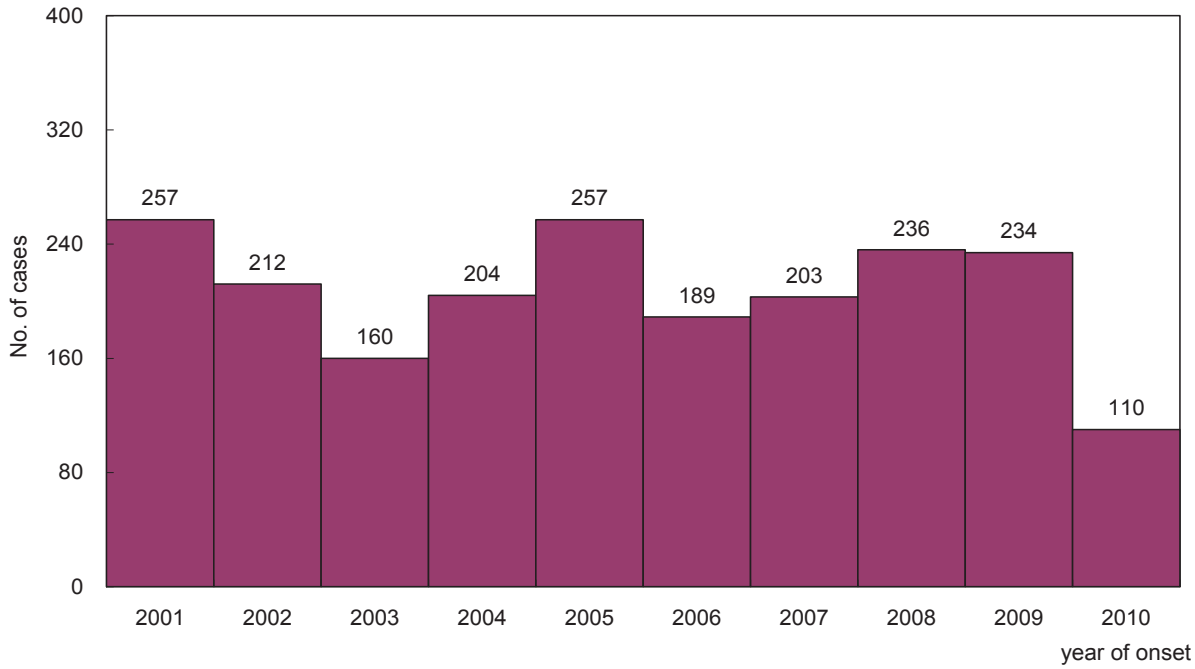


Figure 38 Number of Acute Hepatitis A confirmed cases, 2001-2010

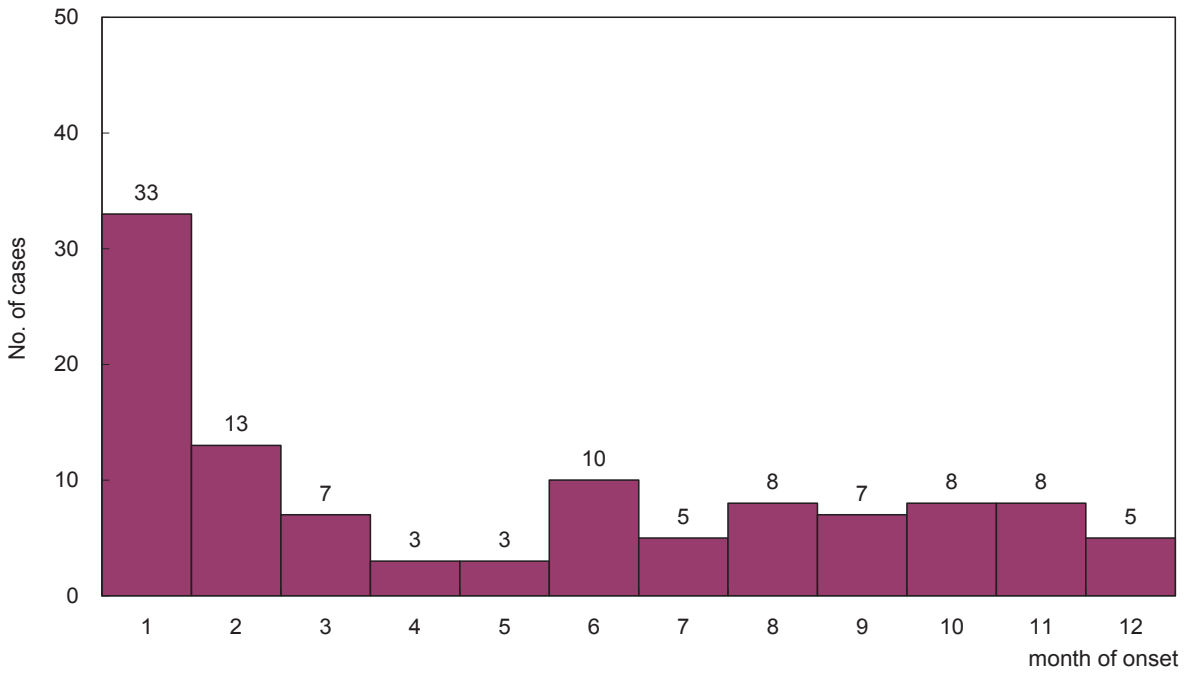


Figure 39 Number of Acute Hepatitis A confirmed cases, 2010

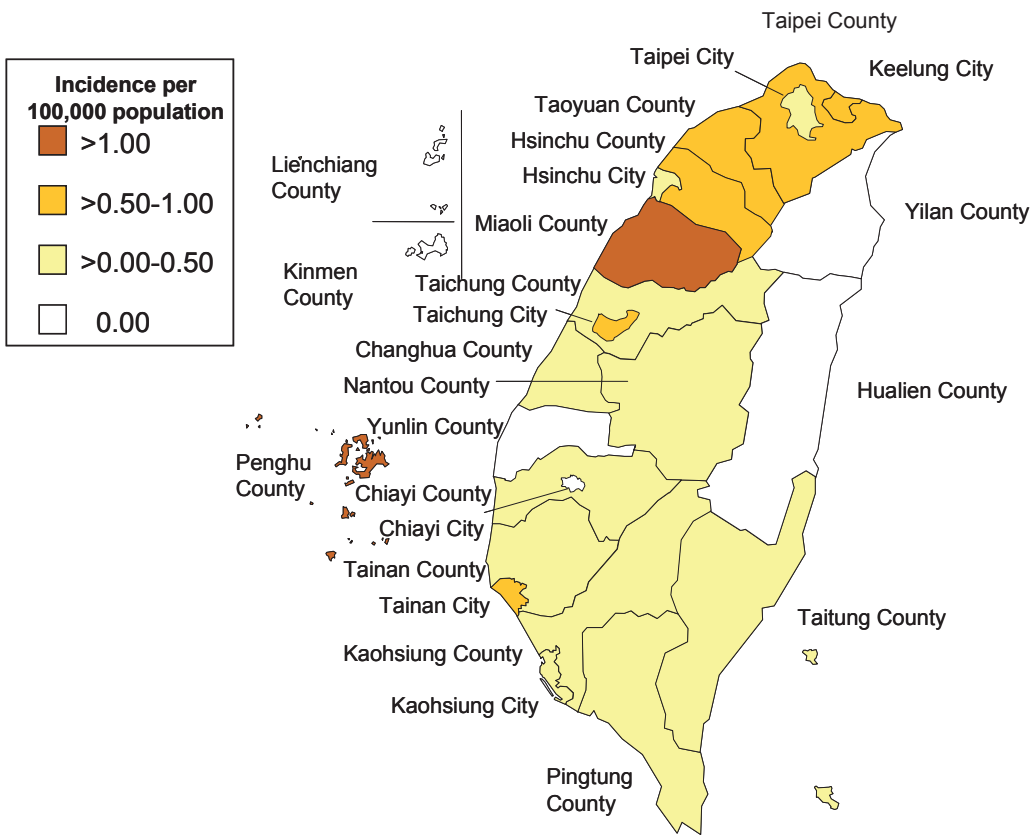


Figure 40 Geographical distribution by incidence of Acute Hepatitis A confirmed cases, 2010

Acute Hepatitis B

In 2010, 172 cases of acute hepatitis B (incidence rate: 0.74 per 100,000 population) were confirmed, which went up as compared with 152 confirmed cases (incidence rate: 0.66 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 99 male cases (57.6%) and 73 female cases (42.4%) with male to female ratio of 1.4:1.0.

(2) By age group

There were 88 cases (51.2%) in 25-39 years age group, 49 cases (28.5%) in 40-64 years age group, 24 cases (14.0%) in 15-24 years age group, and 11 cases (6.4%) in 65 years and over age group.

(3) By month

Confirmed cases occurred in every month of the year without apparent concentration in any of the months.

(4) By residential region

Taipei County ranked the first with 49 confirmed cases (28.5%), followed by 28 cases (16.3%) in Taipei City, 12 cases (7.0%) in Taoyuan County, and 11 cases (6.4%) in Tainan County. The other cities and counties all had less then 10 cases, in which Yilan County, Taitung County, Kinmen County and Lienchiang County had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Keelung City (2.07), followed by Hualien County (1.77), and Taipei County (1.26).

(5) Imported cases and countries of infection

There were 10 imported cases of acute hepatitis B in 2010, including 4 cases from China, 2 cases from Indonesia, and 1 case each from Japan, Thailand, Malaysia and an unknown origin.

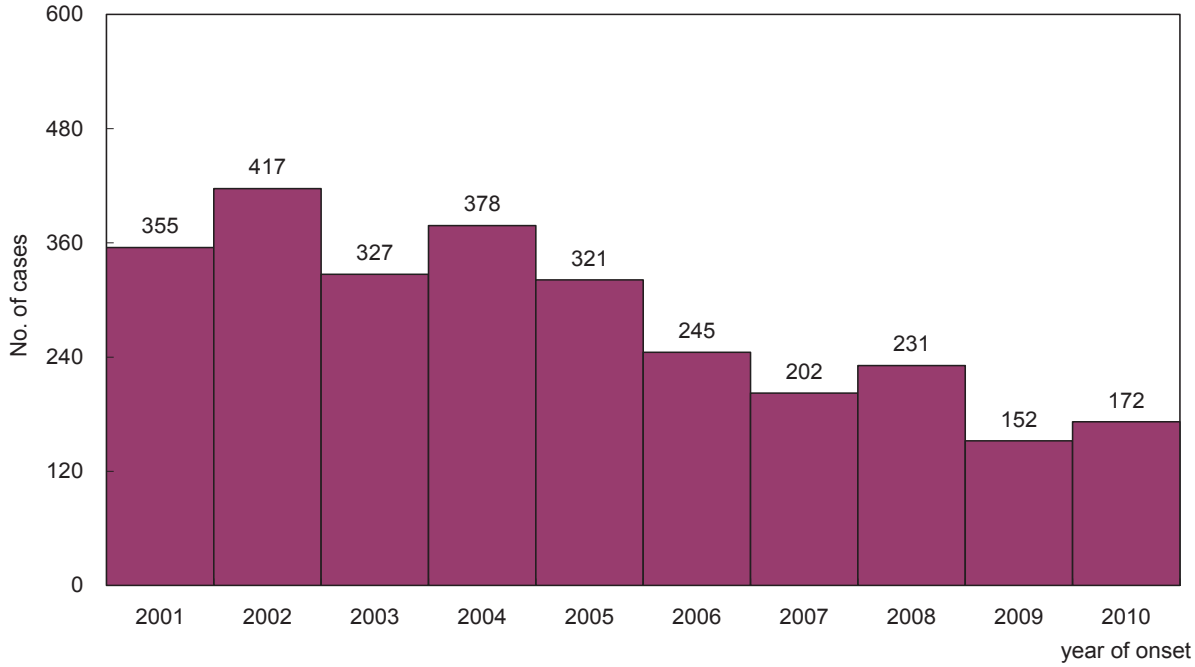


Figure 41 Number of Acute Hepatitis B confirmed cases, 2001-2010

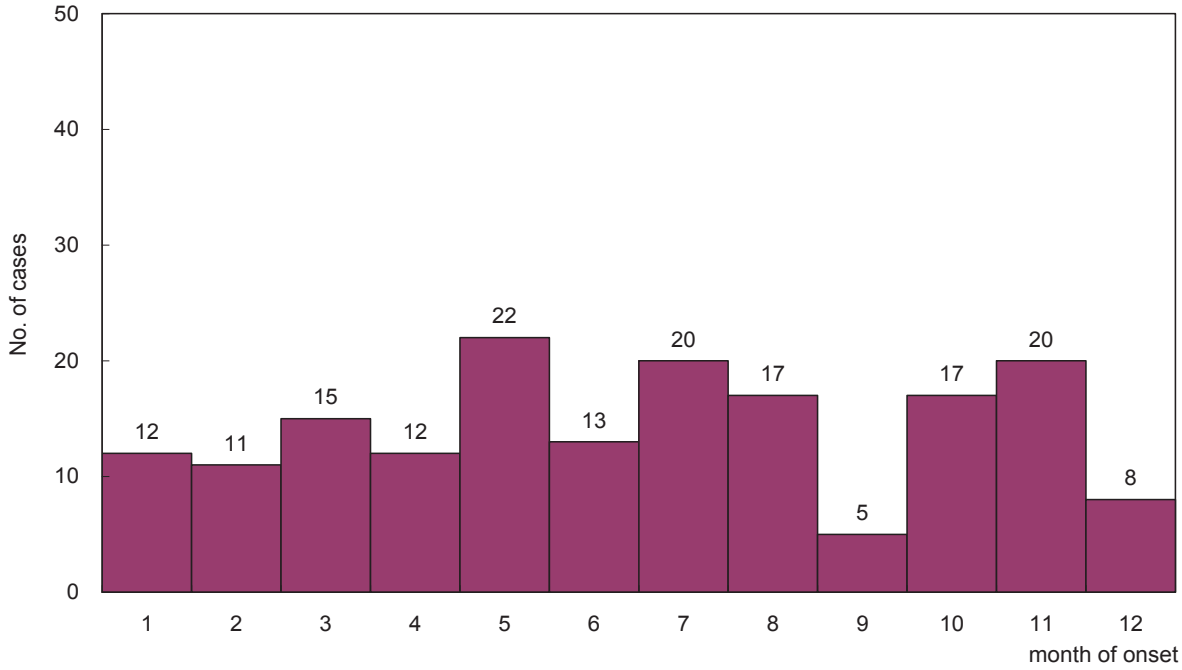


Figure 42 Number of Acute Hepatitis B confirmed cases, 2010

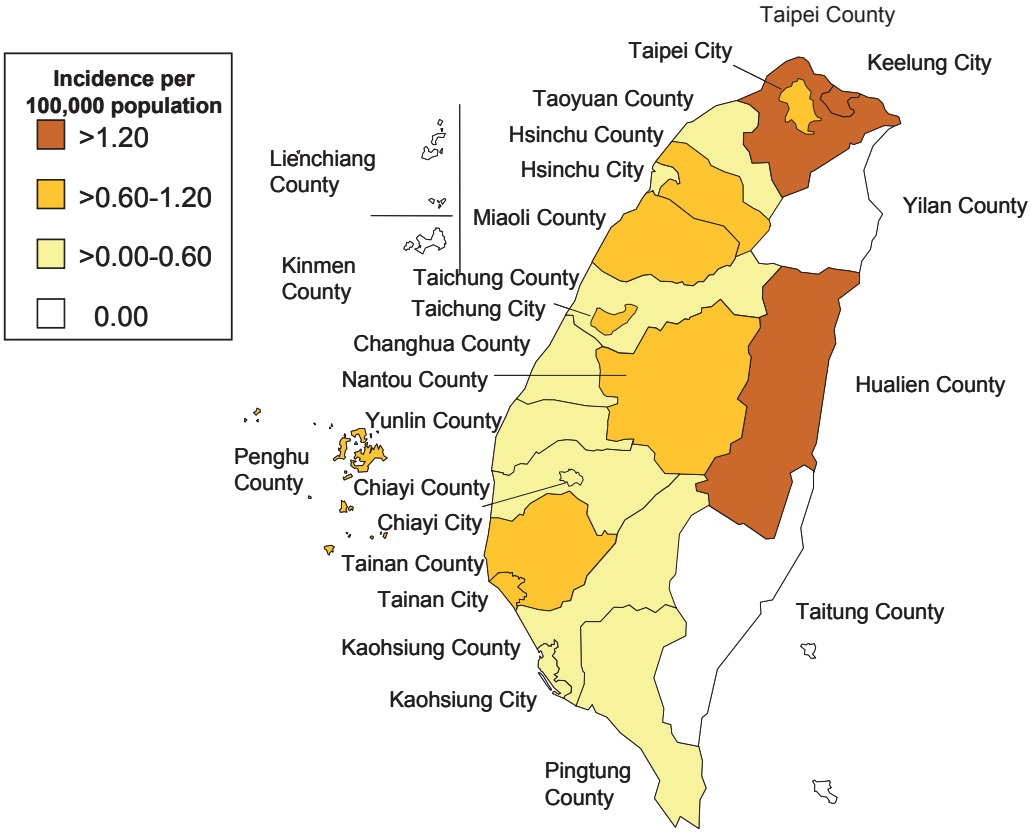


Figure 43 Geographical distribution by incidence of Acute Hepatitis B confirmed cases, 2010

Acute Hepatitis C

In 2010, 41 cases of acute hepatitis C (incidence rate: 0.18 per 100,000 population) were confirmed, which went down as compared with 131 confirmed cases (incidence rate: 0.57 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 22 male cases (53.7%) and 19 female cases (46.3%) with male to female ratio of 1.2:1.0.

(2) By age group

There were 15 cases (36.6%) in 40-64 years age group, 12 cases (29.3%) in 25-39 years age group, 11 cases (26.8%) in 65 years and over age group, 2 cases (4.9%) in 15-24 years age group, and 1 case (2.4%) in 5-14 years age group.

(3) By month

Confirmed cases occurred in every month of the year without apparent concentration in any of the months.

(4) By residential region

Taipei City and Kaohsiung City ranked the first with both 7 confirmed cases, followed by 5 cases in Taipei County, 3 cases each in Miaoli County, Taichung City, Chiayi County, and Tainan County, 2 cases each in Yunlin County and Kaohsiung County, 1 case in Keelung City, Taoyuan County, Nantou County, Chiayi City, Tainan City and Yilan County respectively. The other cities and counties had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Chiayi County (0.55), followed by Miaoli County (0.53), and Kaohsiung City (0.46).

(5) Imported cases and countries of infection

There were no imported cases of acute hepatitis C in 2010.

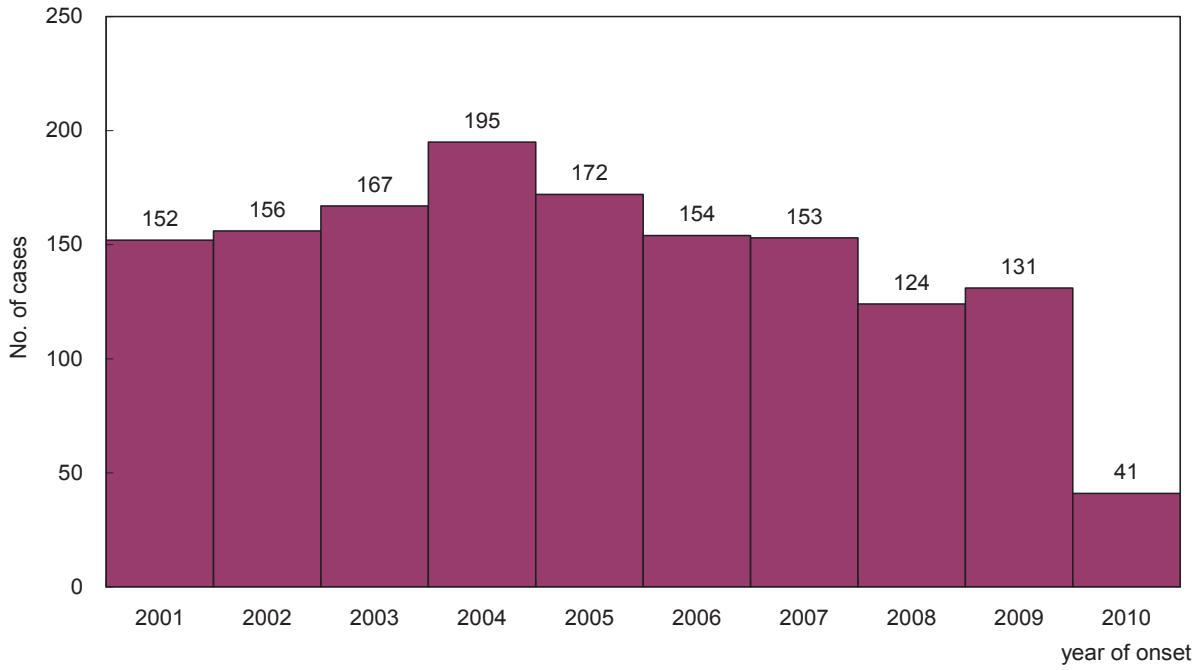


Figure 44 Number of Acute Hepatitis C confirmed cases, 2001-2010

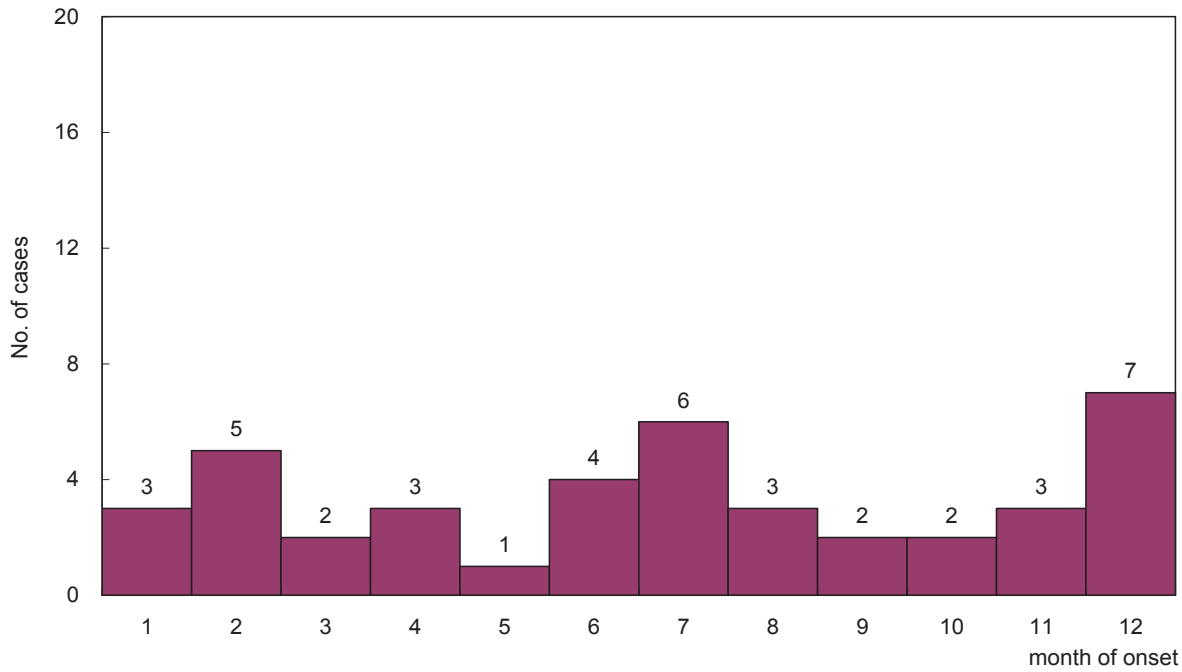


Figure 45 Number of Acute Hepatitis C confirmed cases, 2010

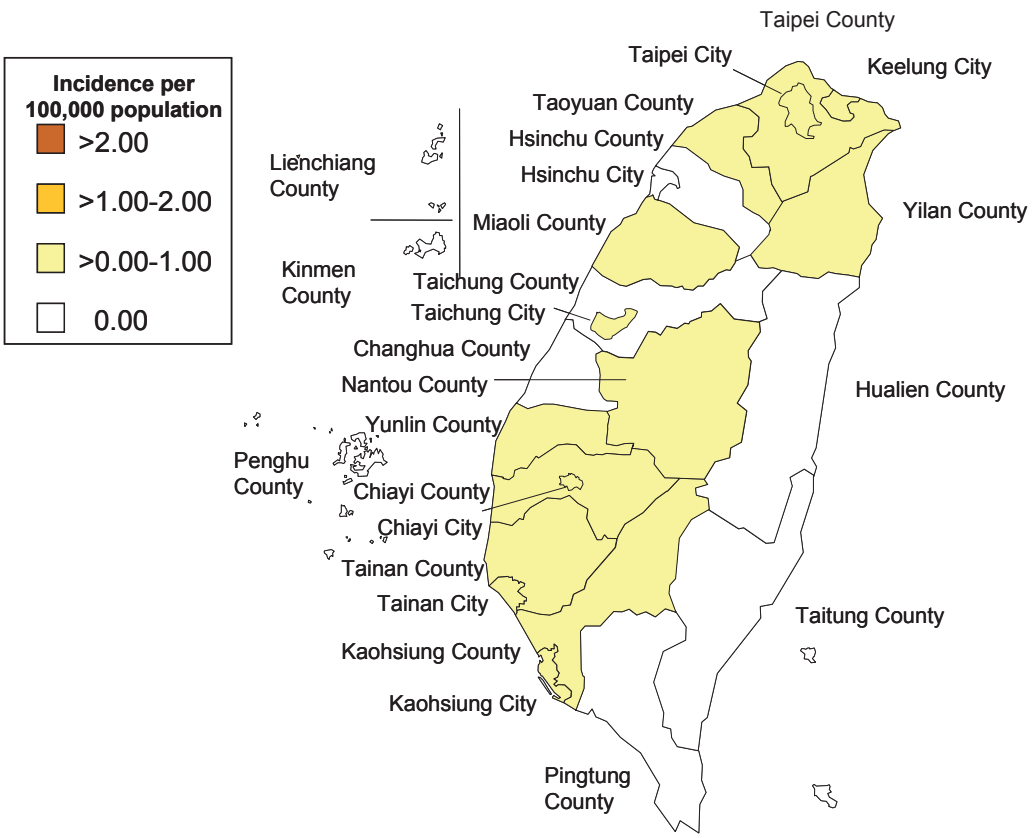


Figure 46 Geographical distribution by incidence of Acute Hepatitis C confirmed cases, 2010

Scrub Typhus

In 2010, 402 cases of scrub typhus (incidence rate: 1.74 per 100,000 population) were confirmed, which went up as compared with 353 confirmed cases (incidence rate: 1.53 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 241 male cases (60.0%) and 161 female cases (40.0%) with male to female ratio of 1.5:1.0.

(2) By age group

The cases occurred predominantly in adults over 25 years of age. In all, there were 196 cases in 40-64 years age group, 89 cases in 25-39 years age group, 54 cases in 15-24 years age group, 46 cases in 65 years and over age group, 11 cases in 5-14 years age group, and 6 cases in 1-4 years age group.

(3) By month

Confirmed cases occurred in every month of the year where July had the most cases with 63 cases, followed by 60 cases in October, 45 cases in January, 40 cases in December, 37 cases in November, and 33 cases in June. The other months were all had less then 30 cases.

(4) By residential region

Taitung County ranked the first with 76 confirmed cases, followed by 50 cases in Kinmen County, 47 cases in Hualien County, 36 cases in Penghu County, 30 cases in Taipei County, 24 cases in Taipei City, 23 cases in Kaohsiung City, 17 cases each in Nantou County and Lienchiang County, and 11 cases in Kaohsiung County. The other cities and counties all had less then 10 cases, in which Chiayi City had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Lienchiang County (171.16), followed by Kinmen County (52.31), Penghu County (37.28), Taitung County (32.82), and Hualien County (13.83), whereas the other cities and counties had incidence rate below 10.00.

(5) Imported cases and countries of infection

There was one imported case of scrub typhus from China in 2010.

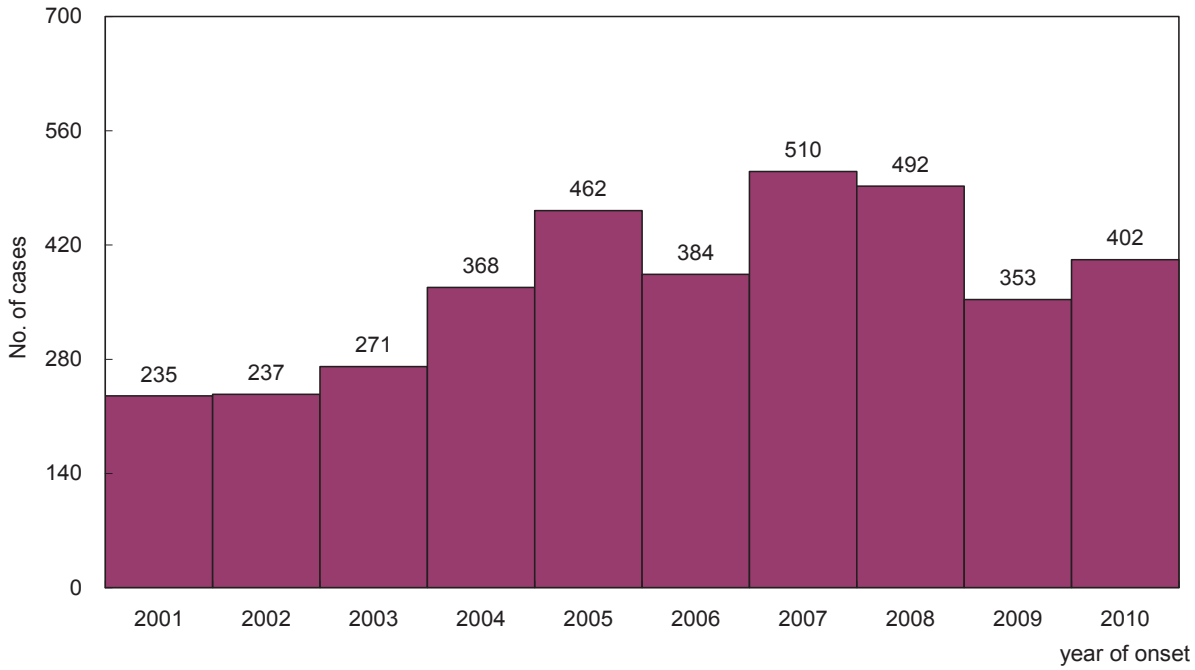


Figure 47 Number of Scrub Typhus confirmed cases, 2001-2010

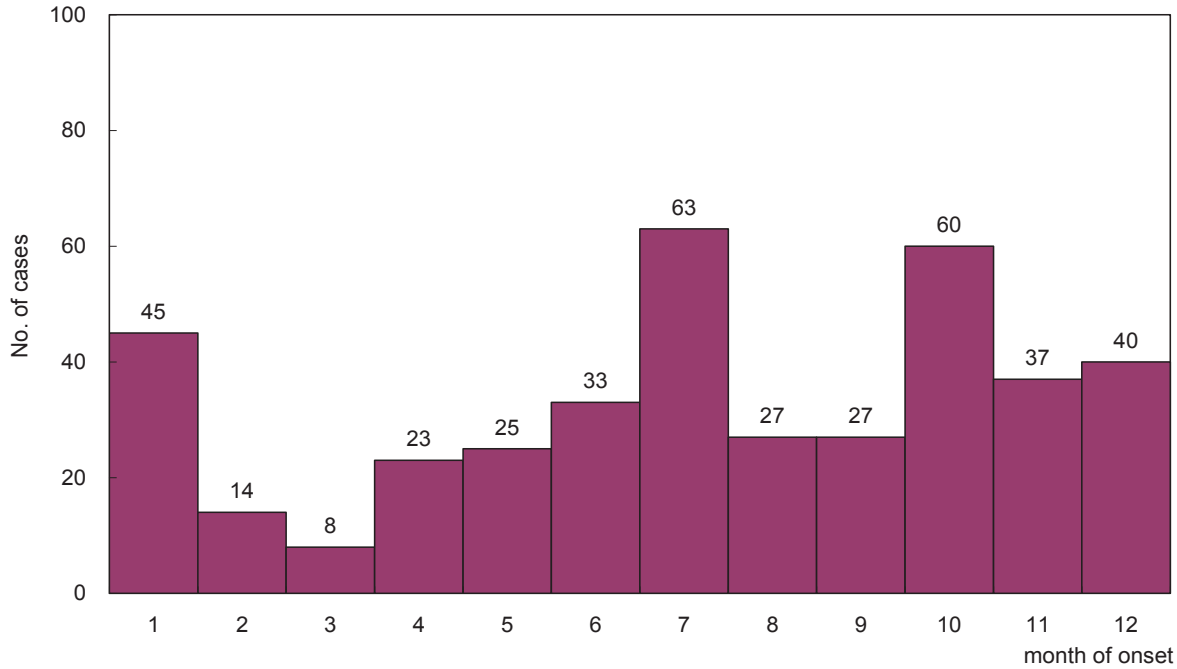


Figure 48 Number of Scrub Typhus confirmed cases, 2010

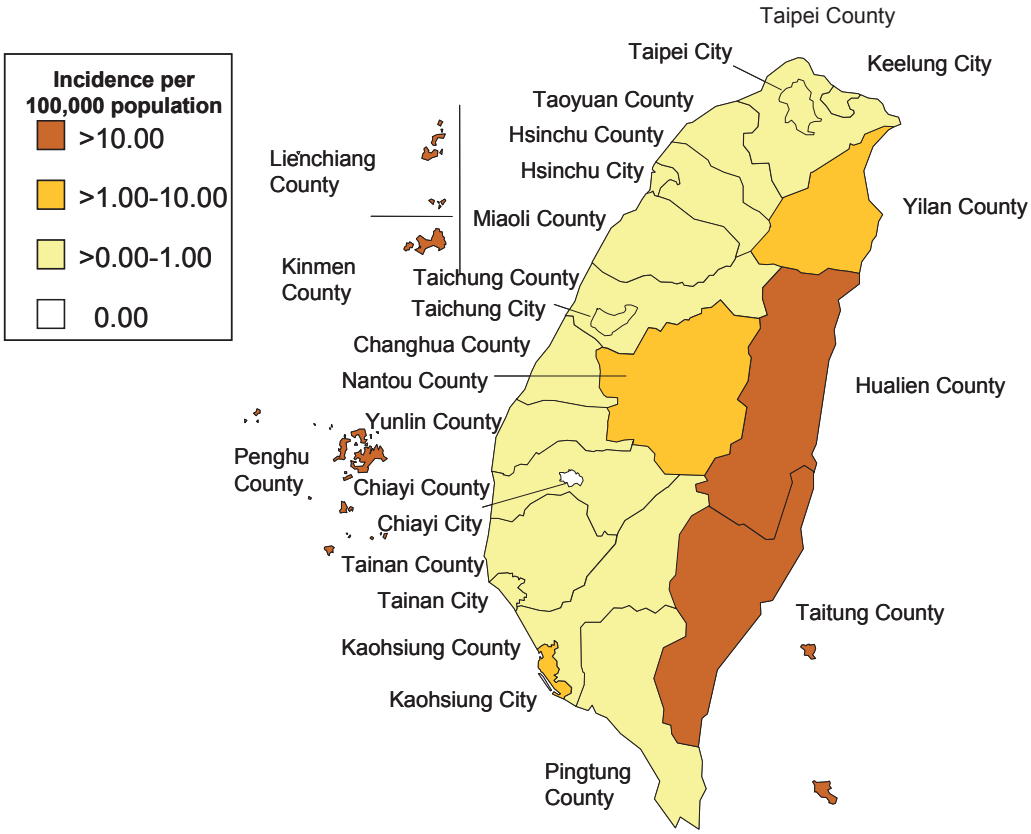


Figure 49 Geographical distribution by incidence of Scrub Typhus confirmed cases, 2010

Legionellosis

In 2010, 102 cases of legionellosis (incidence rate: 0.44 per 100,000 population) were confirmed, which went up as compared with 84 confirmed cases (incidence rate: 0.36 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 85 male cases (83.3%) and 17 female cases (16.7%) with male to female ratio of 5.0:1.0.

(2) By age group

The cases occurred predominantly in elderly people. In all, there were 50 cases in 65 years and over age group, 44 cases in 40-64 years age group, 6 cases in 25-39 years age group, and 2 cases in 15-24 years age group.

(3) By month

Confirmed cases occurred in every month of the year where September and October had the most cases each with 13 cases, followed by 12 cases in August, 11 cases each in March and November, 8 cases each in July and December, 7 cases each in February and June, 6 cases in January, and 3 cases each in April and May.

(4) By residential region

Taipei City ranked the first with 18 confirmed cases, followed by 17 cases in Taipei County, 13 cases in Tainan County, 8 cases in Tainan City, 6 cases in Changhua County, Kaohsiung City and Kaohsiung County respectively, and 5 cases each in Taoyuan County and Taichung County. The other cities and counties had less than 5 cases, in which Hsinchu City, Nantou County, Taitung County, Penghu County, Kinmen County and Lienchiang County had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Tainan County (1.18), followed by Tainan City (1.04), and Taipei City (0.69).

(5) Imported cases and countries of infection

There were 4 imported cases of legionellosis in 2010, including 3 cases from China, while the other's infection origin was unknown.

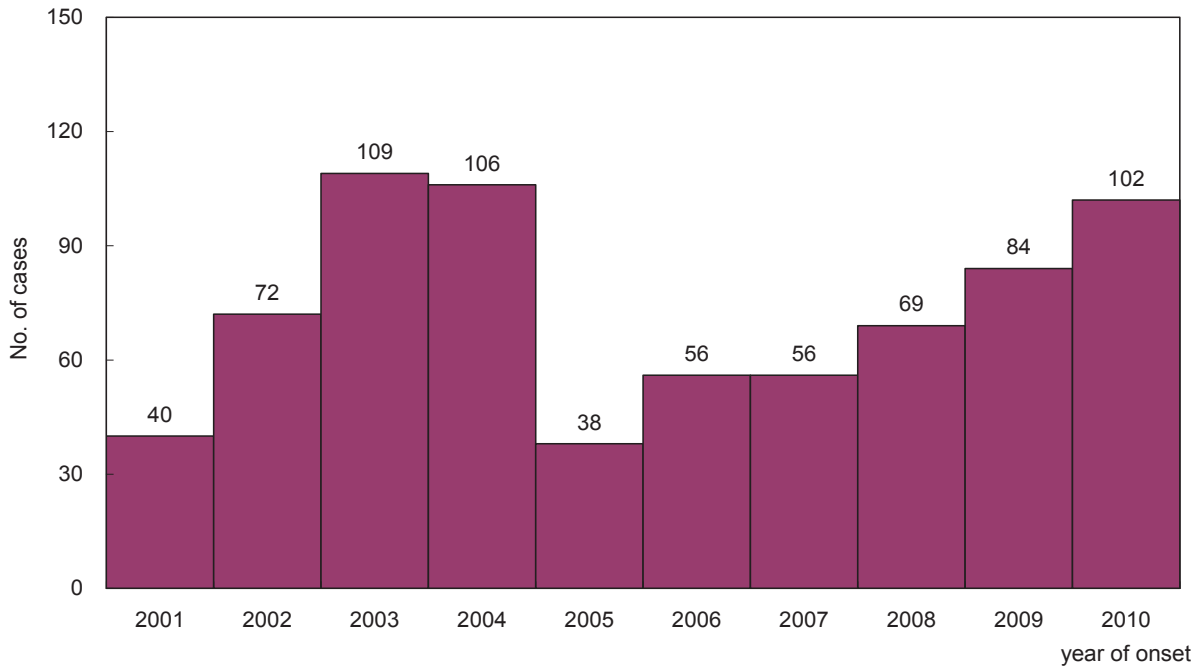


Figure 50 Number of Legionellosis confirmed cases, 2001-2010

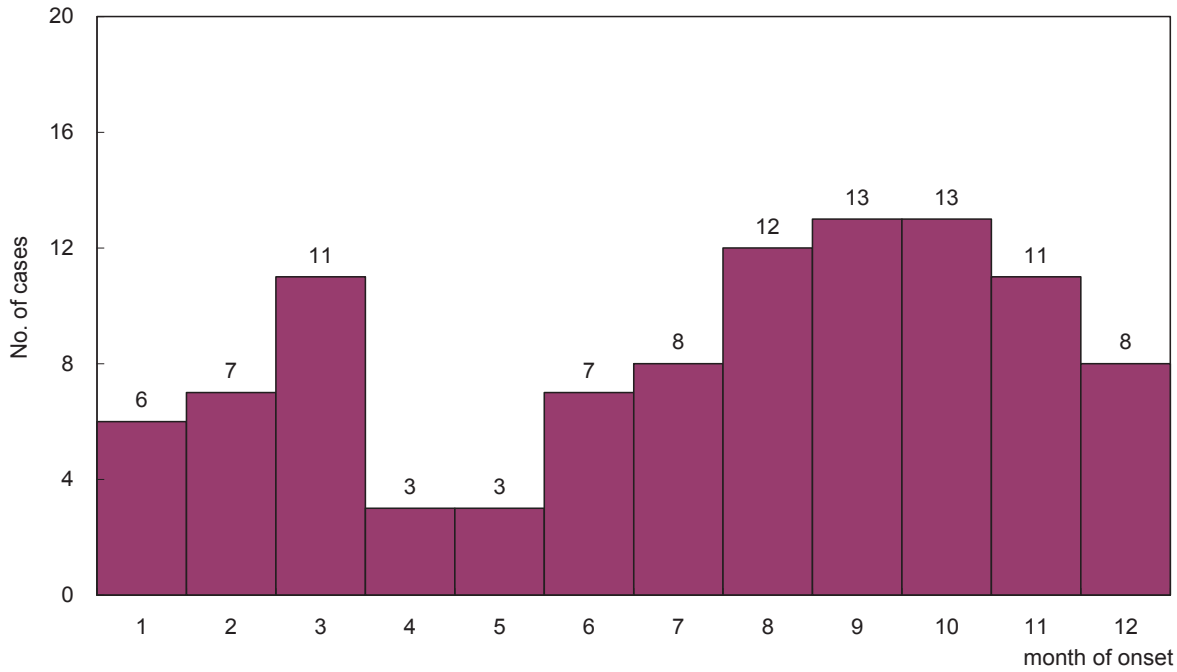


Figure 51 Number of Legionellosis confirmed cases, 2010

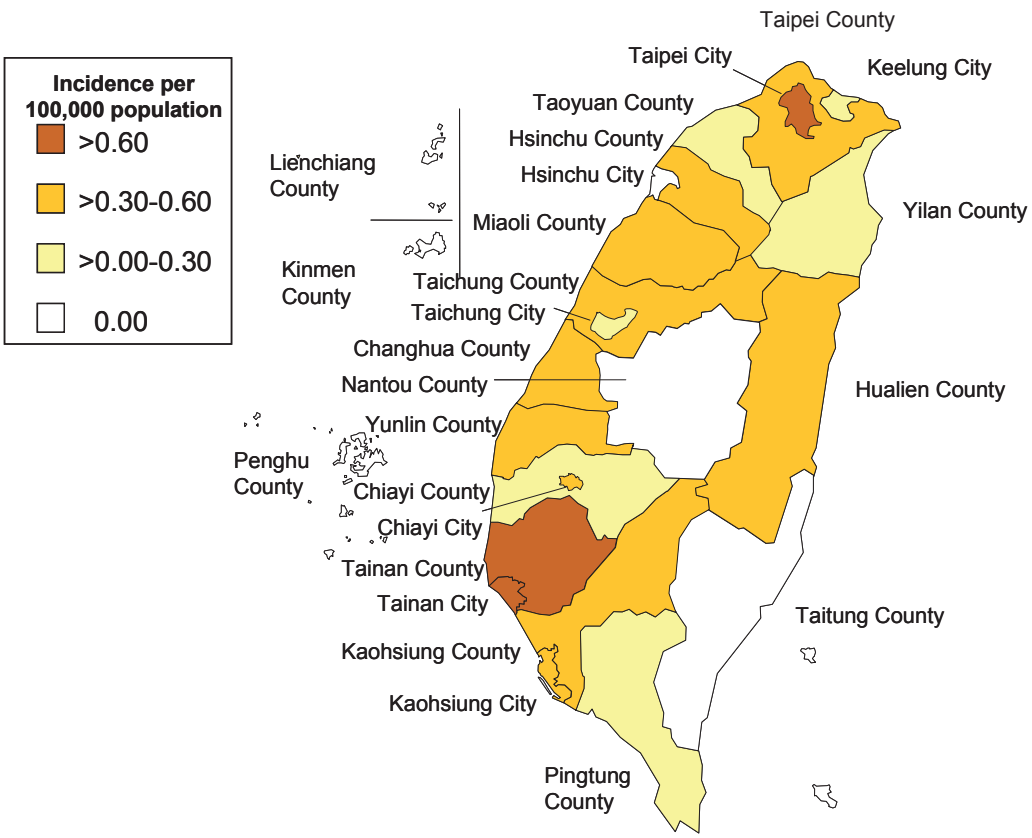


Figure 52 Geographical distribution by incidence of Legionellosis confirmed cases, 2010

Dengue Fever

In 2010, 1,896 cases of dengue fever (incidence rate: 8.19 per 100,000 population) were confirmed, which went up significantly as compared with 1,052 confirmed cases (incidence rate: 4.56 per 100,000 population) in 2009.

Also, 21 cases of dengue hemorrhagic fever/dengue shock syndrome (incidence rate: 0.09 per 100,000 population) were confirmed in 2010, which went up as compared with 11 confirmed cases (incidence rate: 0.05 per 100,000 population) in 2009.

In the confirmed cases of dengue fever, there were 304 imported cases and 1,592 indigenous cases. In the 21 confirmed cases of dengue hemorrhagic fever/dengue shock syndrome, there were 3 imported cases (with residence in Taichung County, Nantou County or Tainan City) and 18 indigenous cases (7 cases in Tainan City, 6 cases in Kaohsiung City, 4 cases in Tainan County and 1 case in Kaohsiung County). The data of confirmed cases of dengue fever in 2010 were analyzed as follows:

(1) By gender

In the 304 imported cases, there were 180 male cases (59.2%) and 124 female cases (40.8%) with male to female ratio of 1.5:1.0.

In the 1,592 indigenous cases, there were 753 male cases (47.3%) and 839 female cases (52.7%) with male to female ratio of 0.9:1.0.

(2) By age group

In the 304 imported cases, 2 cases (0.7%) were in 1-4 years age group, 22 cases (7.2%) were in 5-14 years age group, 49 cases (16.1%) were in 15-24 years age group, 129 cases (42.4%) were in 25-39 years age group, 99 cases (32.6%) were in 40-64 years age group, and 3 cases (1.0%) were in 65 years and over age group.

In the 1,592 indigenous cases, 9 cases (0.6%) were in 1-4 years age group, 104 cases (6.5%) were in 5-14 years age group, 170 cases (10.7%) were in 15-24 years age group, 322 cases (20.2%) were in 25-39 years age group, 670 cases (42.1%) were in 40-64 years age group, and 317 cases (19.9%) were in 65 years and over age group.

(3) By month

In the 304 imported cases, confirmed cases were occurred in every month of the year where June to October, February, and December all had 20 or more confirmed cases. In all, August ranked the first with 74 cases (24.3%), followed by 52 cases (17.1%) in September, 35 cases (11.5%) in July, 25 cases (8.2%) in October, 21 cases (6.9%) each in February and December, and 20 cases (6.6%) in June, while the other months all had less than 20 confirmed cases.

In the 1,592 indigenous cases, confirmed cases were occurred in every month of the year

where September through December all had more than 100 confirmed cases. In all, October ranked the first with 576 cases (36.2%), followed by 380 cases (23.9%) in November, 349 cases (21.9%) in September, 163 cases (10.2%) in December, 74 cases (4.6%) in August, and 36 cases (2.3%) in January, while the other months all had less than 5 confirmed cases.

(4) By residential region

The 304 imported cases were spread in 23 cities and counties throughout Taiwan, including 59 cases in Taipei County, 58 cases in Taipei City, 38 cases in Taoyuan County, 21 cases in Taichung County, 19 cases in Kaohsiung City, 14 cases in Taichung City, 12 cases in Kaohsiung County, and 10 cases in Tainan City. The other cities and counties all had less than 10 imported cases, in which Penghu County and Lienchiang County had no confirmed imported cases.

The 1,592 indigenous cases were spread in 10 cities and counties, including 990 cases in Kaohsiung City, 380 cases in Tainan City, 107 cases in Tainan County, 85 cases in Kaohsiung County, 15 cases in Taipei County, 10 cases in Pingtung County, 2 cases in Taipei City, and 1 case in Taoyuan County, Hsinchu County, and Chiayi County respectively.

Overall, the incidence rate of confirmed cases per 100,000 population was the highest in Kaohsiung City (65.99), followed by Tainan City (50.54), and Tainan County (10.43).

(5) Imported cases and countries of infection

In the 304 imported cases, there were 96 cases (31.6%) from Indonesia that accounted for the highest percentage, 61 cases (20.1%) from Vietnam, 36 cases (11.8%) from Thailand, 34 cases (11.2%) from Philippines, 21 cases (6.9%) from Cambodia, 19 cases from Malaysia, 12 cases from India, 7 cases from Myanmar, 5 cases from Singapore, 3 cases each from Bangladesh and Laos, and 1 case from Peru, Maldives and St. Vincent respectively. There were another 4 imported cases with country of infection unknown.

(6) By virus type

In the 304 imported cases, 71 cases were caused by dengue virus type 1, 62 cases by type 2, 35 cases by type 3, and 20 cases by type 4. The other 116 cases were undetermined.

In the 1,592 indigenous cases, 53 cases were caused by dengue virus type 1, 204 cases by type 2, 346 cases by type 3, and 246 cases by type 4. The other 743 cases were undetermined.

(7) By clinical symptoms

In the 1,896 confirmed cases, 1,801 cases experienced clinical symptoms, while the other 95 cases were infected without any symptoms. In the 304 imported cases, 11 cases were no symptoms, and in the 1,592 indigenous cases, 84 cases were no symptoms.

Table 26 Virus type and infection source of Dengue Fever confirmed case, 2010

Virus type/ infection source	DEN-1	DEN-2	DEN-3	DEN-4	Undetermined	Total
Indonesia	24	20	14	9	29	96
Vietnam	20	3	3	5	30	61
Thailand	7	13	6	-	10	36
Philippines	4	9	4	2	15	34
Cambodia	6	3	1	-	11	21
Malaysia	5	5	3	1	5	19
India	2	1	2	1	6	12
Myanmar	1	1	1	1	3	7
Singapore	1	3	-	-	1	5
Laos	-	1	-	-	2	3
Bangladesh	-	-	1	-	2	3
Peru	-	-	-	1	-	1
Maldives	-	-	-	-	1	1
St. Vincent & Grenadines	-	1	-	-	-	1
Unknown	1	2	-	-	1	4
Taiwan	53	204	346	246	743	1,592
Total	124	266	381	266	859	1,896

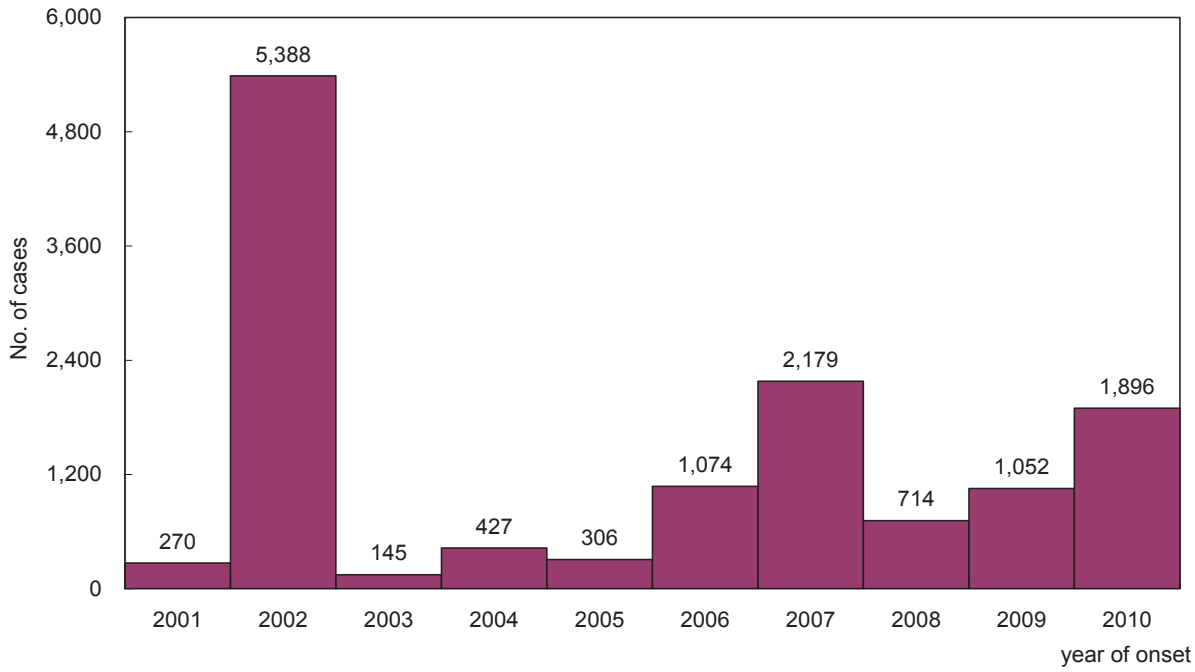


Figure 53 Number of Dengue Fever confirmed cases, 2001-2010

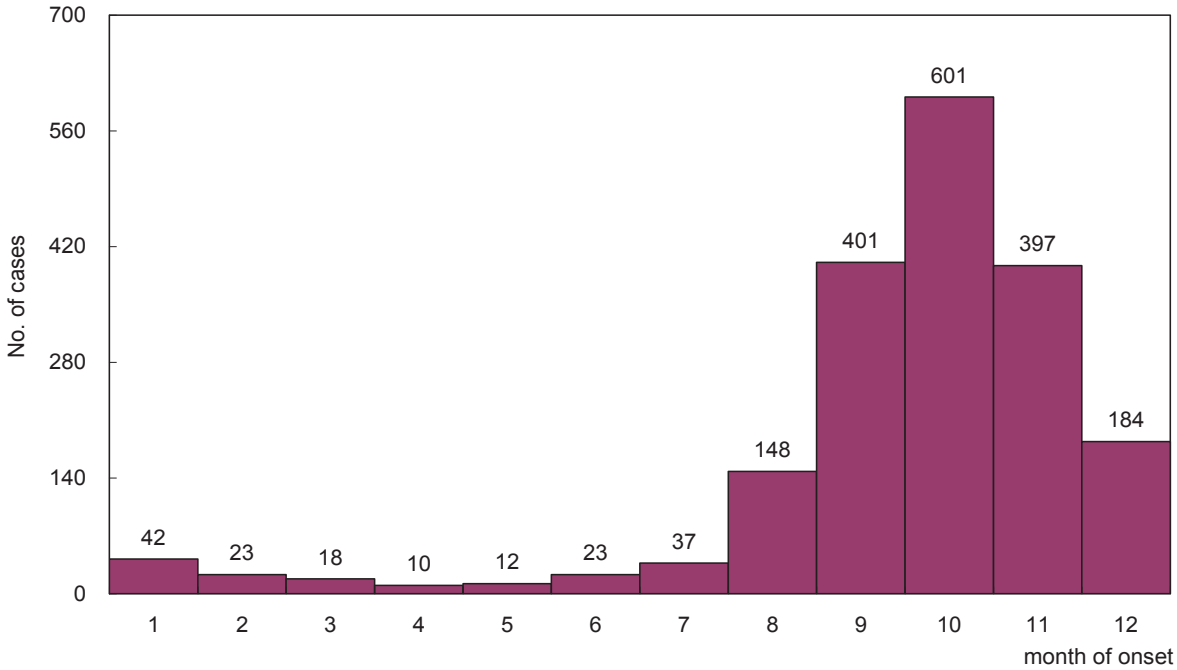


Figure 54 Number of Dengue Fever confirmed cases, 2010

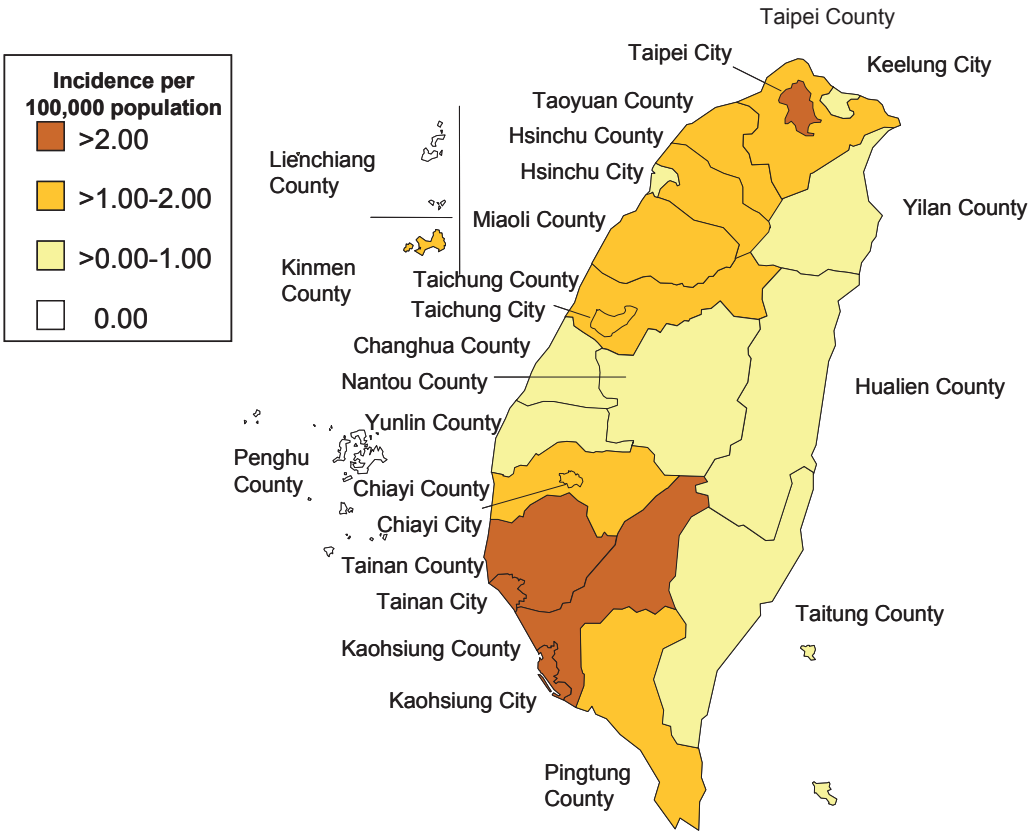


Figure 55 Geographical distribution by incidence of Dengue Fever confirmed cases, 2010

Enteroviruses Infection with Severe Complications

In 2010, 16 cases of enteroviruses infection with severe complications (incidence rate: 0.07 per 100,000 population) were confirmed, which went down as compared with 29 confirmed cases (incidence rate: 0.13 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 8 male cases (50.0%) and 8 female cases (50.0%) with male to female ratio of 1.0:1.0.

(2) By age group

The cases occurred primarily in age groups under 14 years of age. In all, there were 9 cases in 1-4 years age group (3 cases were 1 year of age, 4 cases were 2 years of age, and 2 cases were 3 years of age), 6 cases in 0-1 year age group, and 1 case in 5-14 years age group.

In the 6 cases in 0-1 year age group, 2 cases each were 8 months old and less than 1 month old, and 1 case each were 5 months old and 10 months old.

(3) By month

The confirmed cases occurred in February through July and September where April and June had the most cases (4 cases each), followed by 3 cases in May, 2 cases in March, and 1 case in February, July and September respectively. The other months do not have confirmed cases.

(4) By residential region

Taoyuan County ranked the first with 5 cases, followed by 3 cases in Kaohsiung County, 2 cases in Taipei County, and 1 case in Taipei City, Changhua County, Nantou County, Yunlin County, Chiayi City and Yilan County respectively. The other cities and counties had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Chiayi City (0.37), followed by Taoyuan County (0.25), and Kaohsiung County (0.24).

(5) Imported cases and countries of infection

There was 1 imported case of enteroviruses infection with severe complications from China in 2010.

(6) Pathogen identification

After assay with serum neutralization tests, enzyme-linked immunosorbent assays (ELISA) of IgM, virus culture, and RT-PCR, EV71 was the main virus isolated in 12 confirmed cases. The rest were 2 cases of Coxsackievirus B1 and 1 case each of Coxsackievirus A5 and A16.

Table 27 Number of Enteroviruses Infection with Severe Complications confirmed cases by age, 2007-2010

	2007		2008		2009		2010	
	No. of cases	(%)	No. of cases	(%)	No. of cases	(%)	No. of cases	(%)
>=0, <7m	1	(8.3)	26	(7.0)	2	(6.9)	3	(18.7)
>=7m, <1yr	-	(-)	39	(10.5)	2	(6.9)	3	(18.7)
>=1, <4 yrs	8	(66.7)	245	(65.7)	19	(65.5)	9	(56.3)
>=4, <7 yrs	2	(16.7)	52	(13.9)	2	(6.9)	1	(6.3)
>=7, <16 yrs	1	(8.3)	11	(2.9)	4	(13.8)	-	(-)
>=16 yrs	-	(-)	-	(-)	-	(-)	-	(-)
Unknown	-	(-)	-	(-)	-	(-)	-	(-)
Total	12	(100.0)	373	(100.0)	29	(100.0)	16	(100.0)

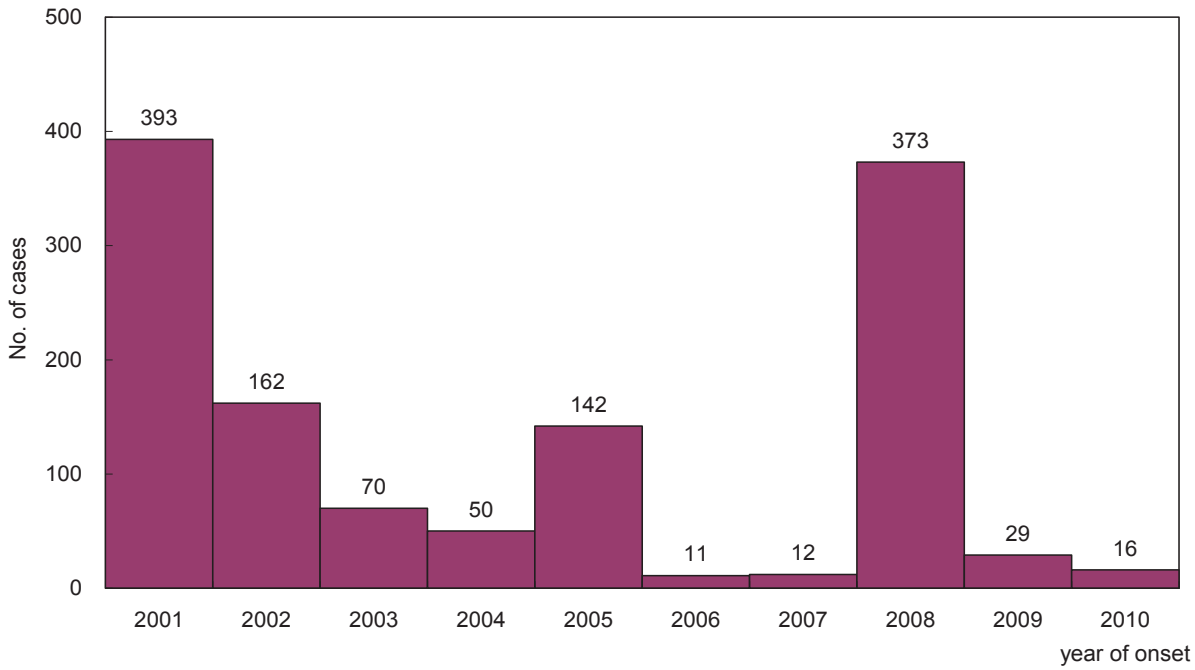


Figure 56 Number of Enteroviruses Infection with Severe Complications confirmed cases, 2001-2010

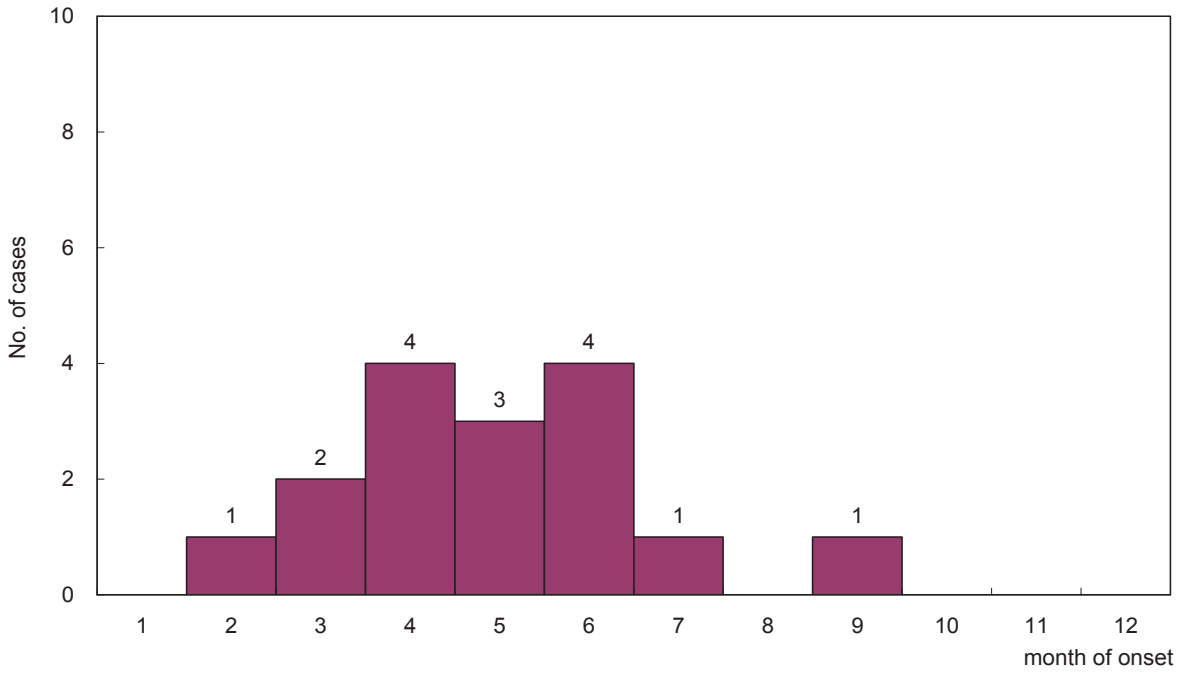


Figure 57 Number of Enteroviruses Infection with Severe Complications confirmed cases, 2010

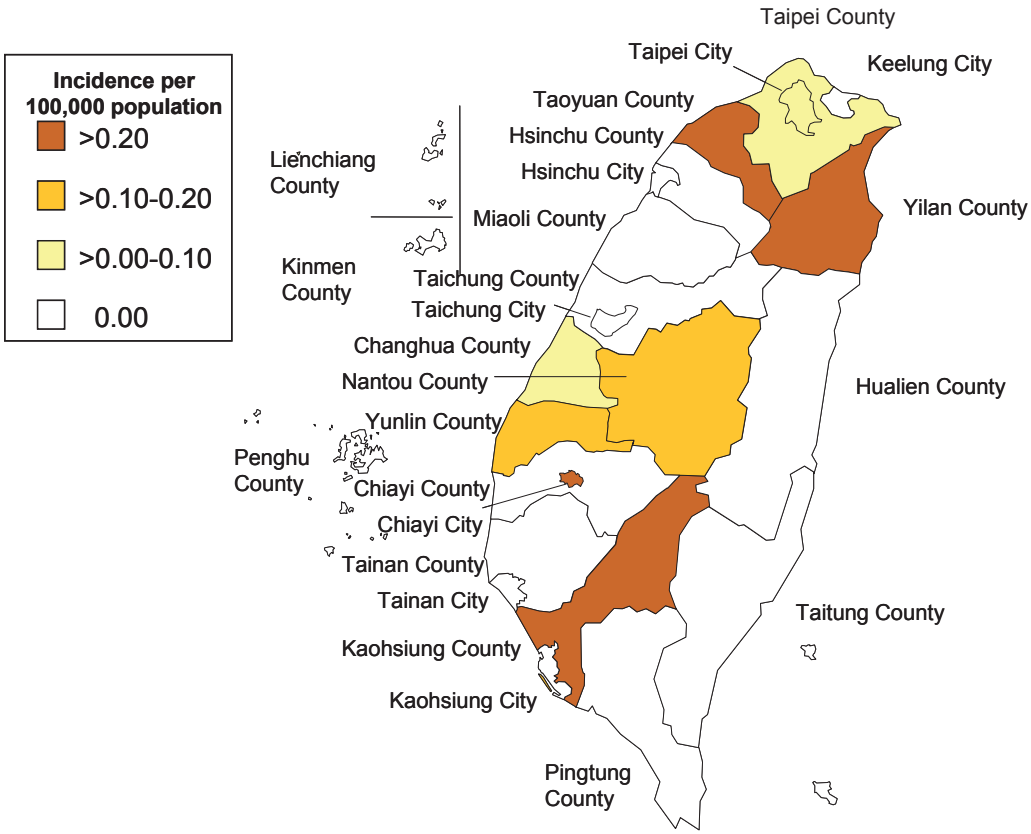


Figure 58 Geographical distribution by incidence of Enteroviruses Infection with Severe complication, 2010

Malaria

In 2010, 21 cases of malaria (incidence rate: 0.09 per 100,000 population) were confirmed, which went up as compared with 11 confirmed cases (incidence rate: 0.05 per 100,000 population) in 2009. All of these cases were imported. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 18 male cases (85.7%) and 3 female cases (14.3%) with male to female ratio of 6.0:1.0.

(2) By age group

The cases occurred mostly in 40-64 years age group (10 cases), followed by 8 cases in 25-39 years age group and 3 cases in 15-24 years age group.

(3) By month

There were confirmed cases occurred in each month of the year except for December. In all, there were 5 cases in September, 2 cases each in February, May through July, October and November, and 1 case in January, March, April and August respectively.

(4) By residential region

Taipei City ranked the first with 5 cases, followed by 4 cases in Taipei County, 3 cases in Taichung City, 2 cases in Taoyuan County, and 1 case in Keelung City, Miaoli County, Taichung County, Changhua County, Chiayi County, Tainan City and Tainan County respectively. The other cities and counties had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Taichung City (0.28), followed by Keelung City (0.26), and Taipei City (0.19).

(5) Imported cases and countries of infection

In the 21 imported cases, 6 cases (28.6%) were from Asia, specifically with 2 cases from Myanmar, and 1 case each from China, Indonesia, India and Thailand; 11 cases (52.4%) were from Africa, specifically with 4 cases from Burkina Faso, 2 cases from Nigeria, and 1 case from Central African Republic, Gambia, Ethiopia, Mozambique, and Sao Tome and Principe respectively; 4 cases (19.0%) were from Oceania, specifically with 3 cases from Solomon Islands and 1 case from Papua New Guinea.

(6) Types of infectious protozoan

By the types of infectious protozoa, there were 11 cases of *Plasmodium falciparum*, 8 cases of *Plasmodium vivax*, and 1 each of *Plasmodium malariae* and mixed infection (*Plasmodium falciparum* and *Plasmodium vivax*).

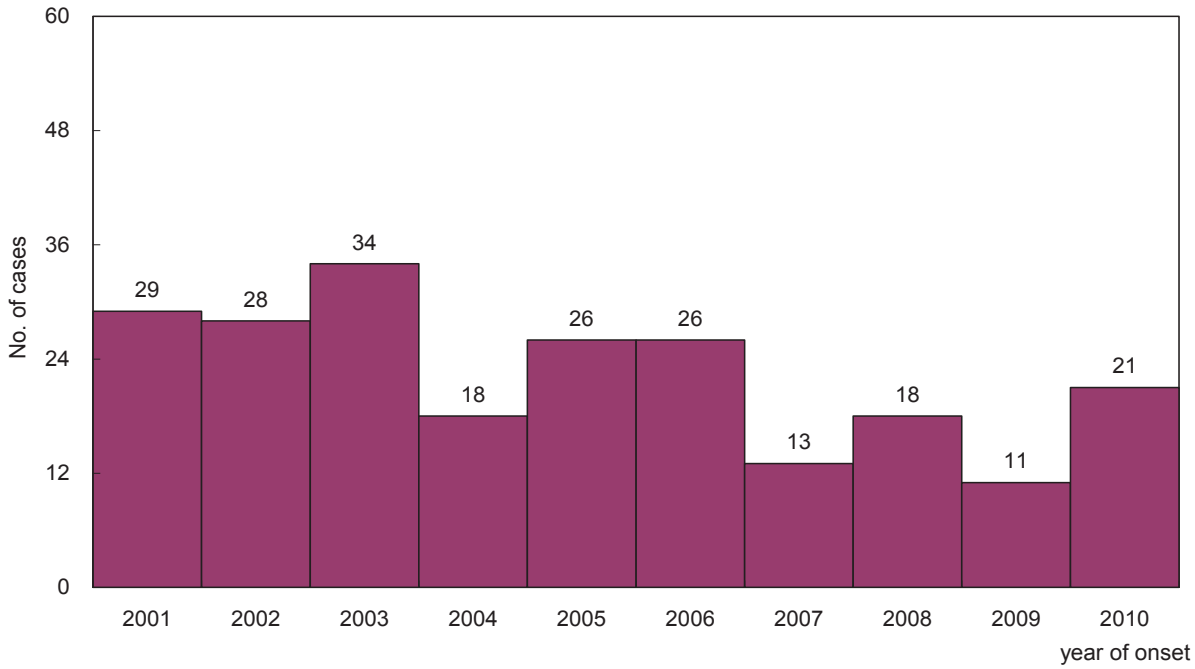


Figure 59 Number of imported Malaria confirmed cases, 2001-2010

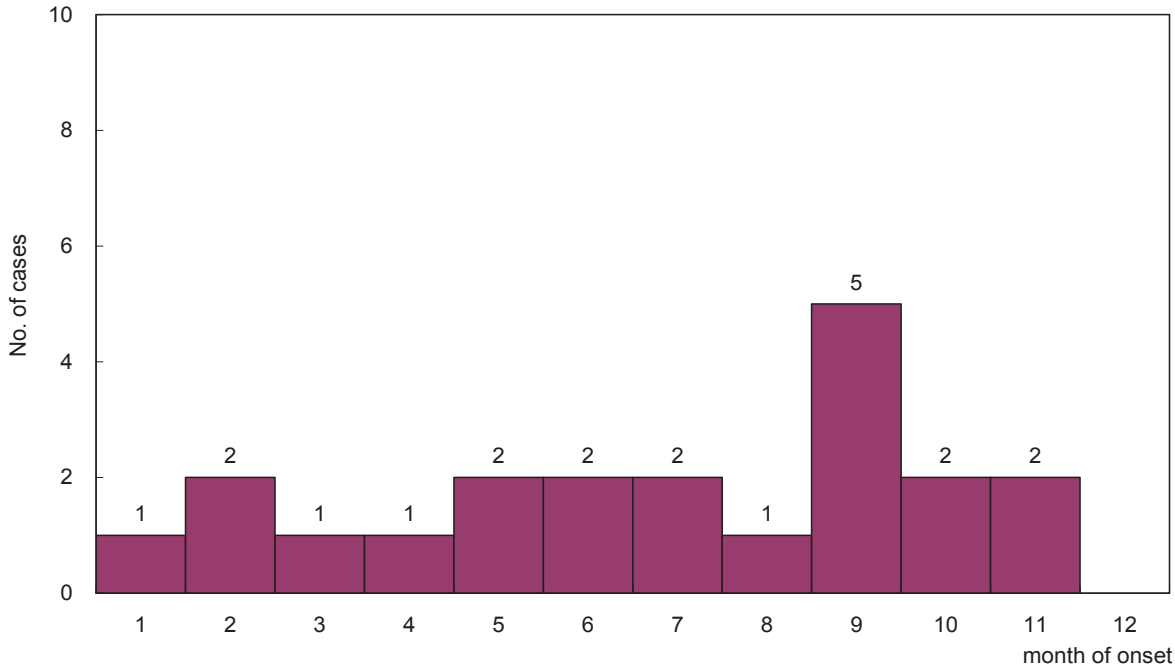


Figure 60 Number of imported Malaria confirmed cases, 2010

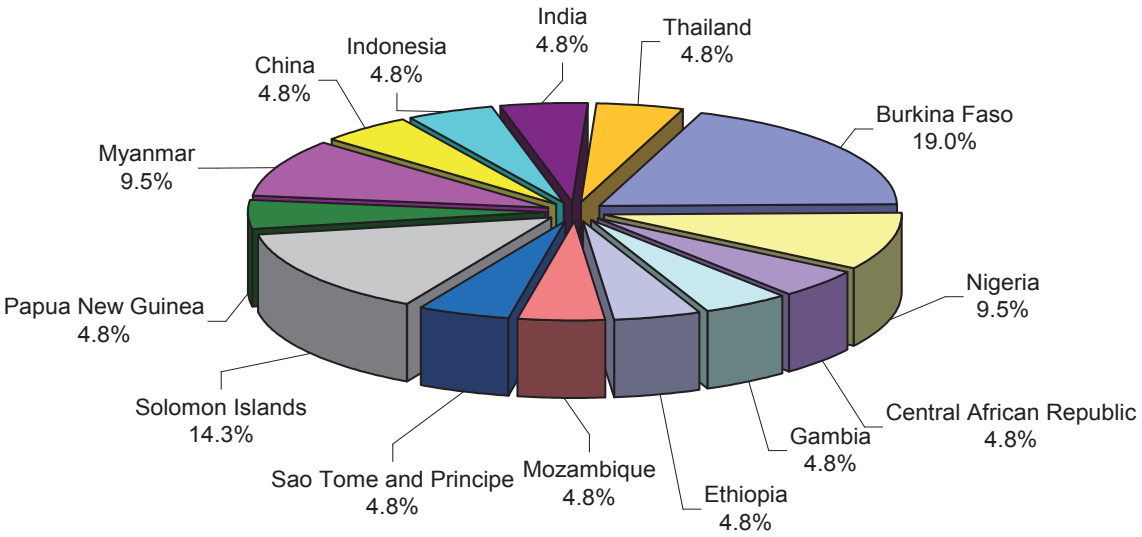


Figure 61 Infections source of imported Malaria confirmed cases, 2010

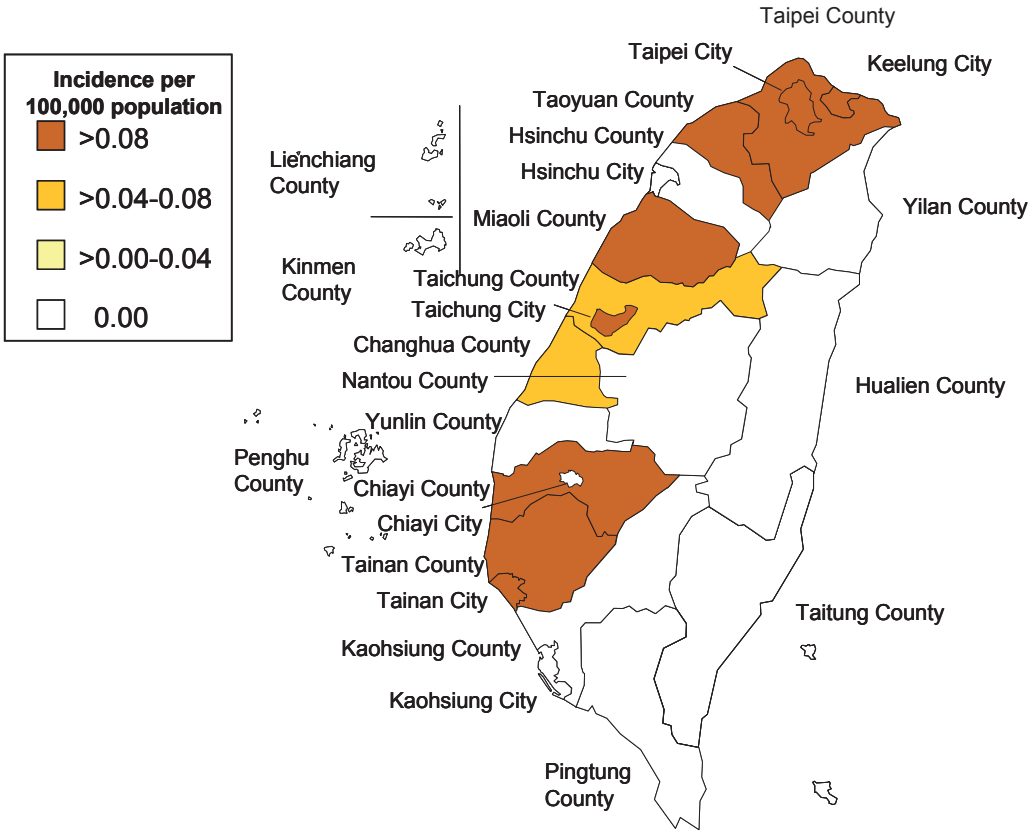


Figure 62 Geographical distribution by incidence of imported Malaria confirmed cases, 2010

Shigellosis

In 2010, 172 cases of shigellosis (incidence rate: 0.74 per 100,000 population) were confirmed, of which 82 cases were imported. It was obviously increase as compare with 52 imported cases among 91 confirmed cases (incidence rate: 0.39 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

In the 82 imported cases, there were 32 male cases (39.0%) and 50 female cases (61.0%) with male to female ratio of 0.6:1.0.

In the 90 indigenous cases, there were 57 male cases (63.3%) and 33 female cases (36.7%) with male to female ratio of 1.7:1.0.

(2) By age group

In the 82 imported cases, there were 5 cases (6.1%) in 1-4 years age group, 4 cases (4.9%) in 5-14 years age group, 21 cases (25.6%) in 15-24 years age group, 34 cases (41.5%) in 25-39 years age group, and 18 cases (22.0%) in 40-64 years age group.

In the 90 indigenous cases, there were 13 cases (14.4%) in 1-4 years age group, 35 cases (38.9%) in 5-14 years age group, 7 cases (7.8%) in 15-24 years age group, 11 cases (12.2%) in 25-39 years age group, 11 cases (12.2%) in 40-64 years age group, and 13 cases (14.4%) in 65 years and over age group.

(3) By month

In the 82 imported cases, confirmed cases occurred in every month of the year where September ranked the first with 28 confirmed cases, followed by 11 cases in July, 7 cases each in February and October, 6 cases in June, 5 cases in May, 4 cases each in January and March, 3 cases each in August and December, and 2 cases each in April and November.

In the 90 indigenous cases, confirmed cases were occurred in every month of the year where November ranked the first with 28 confirmed cases, followed by 19 cases in January, 14 cases in October, 9 cases in December, 7 cases in February, 4 cases in August, 3 cases in March, 2 cases in July, and 1 case each in April through June and September.

(4) By residential region

Out of the 82 imported cases,18 cases resided in Taipei City, followed by 15 cases in Taipei County, 13 cases in Taoyuan County , 6 cases in Taichung County, 5 cases in Hsinchu City, 4 cases each in Hsinchu County and Tainan City, and 3 cases in Hualien County. The other cities and counties had less than 3 cases, in which Keelung City, Yunlin County, Taitung County, Yilan County, Penghu County, Kinmen County and Lienchiang County had no confirmed imported cases.

Out of the 90 indigenous cases, 48 cases resided in Hualien County, followed by 14 cases in Taipei County, 6 cases in Yilan County, 5 cases in Taichung County, 4 cases each in Taipei City and Taoyuan County, 3 cases in Nantou County, 2 cases in Miaoli County, and 1 case in Keelung City, Hsinchu City, Hsinchu County, and Pingtung County respectively. The other cities and counties had no confirmed indigenous cases.

In all, the incidence rate of confirmed cases per 100,000 population was the highest in Hualien County (15.01), followed by Hsinchu City (1.45), and Yilan County (1.30).

(5) Imported cases and countries of infection

All of the 82 imported cases came from Asian countries, specifically with 38 cases from Indonesia, 16 cases from Cambodia, 8 cases from China, 6 cases from Philippines, 4 cases from Vietnam, 3 cases each from India and Thailand, and 1 case from Hong Kong, Macau, Myanmar, and Malaysia respectively.

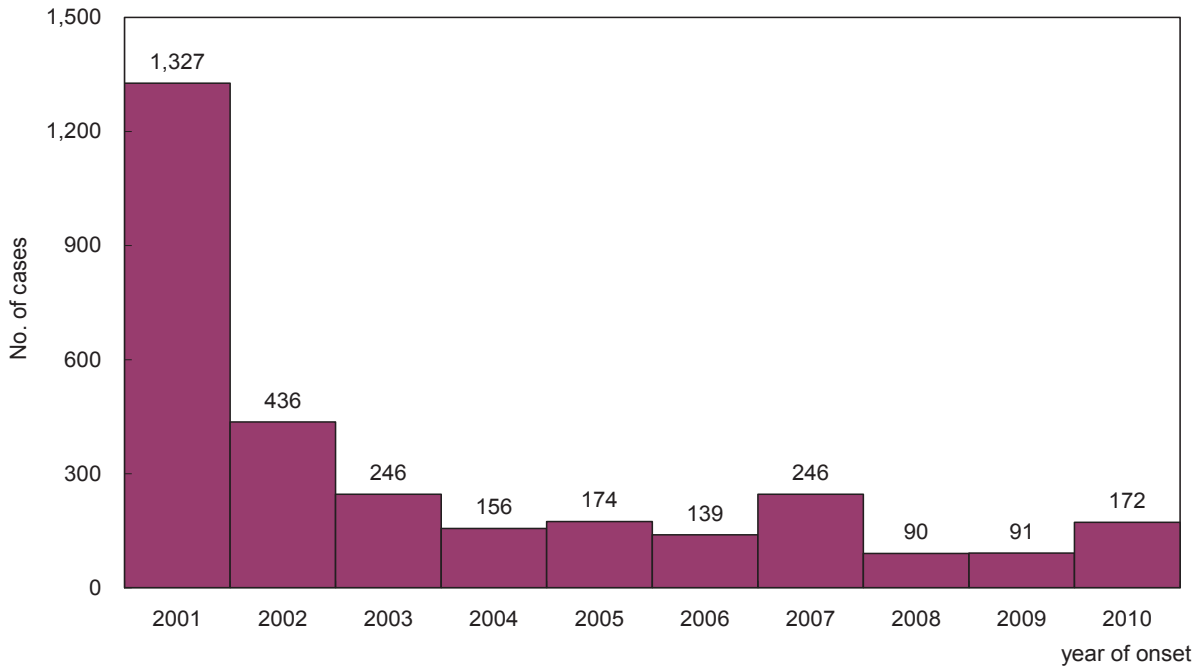


Figure 63 Number of Shigellosis confirmed cases, 2001-2010

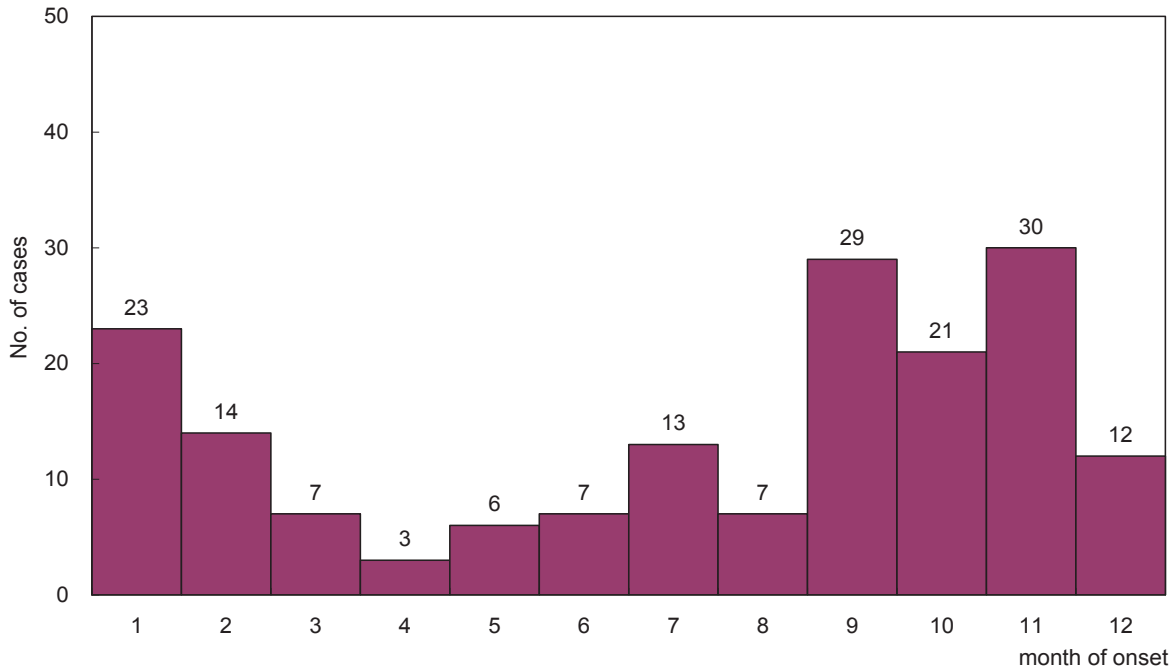


Figure 64 Number of Shigellosis confirmed cases, 2010

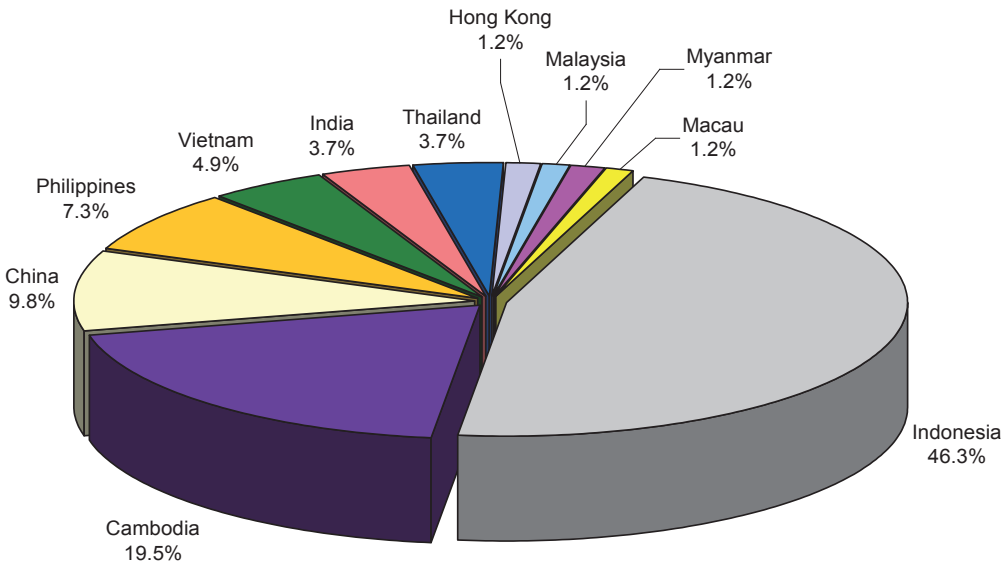


Figure 65 Infections source of Shigellosis confirmed cases, 2010

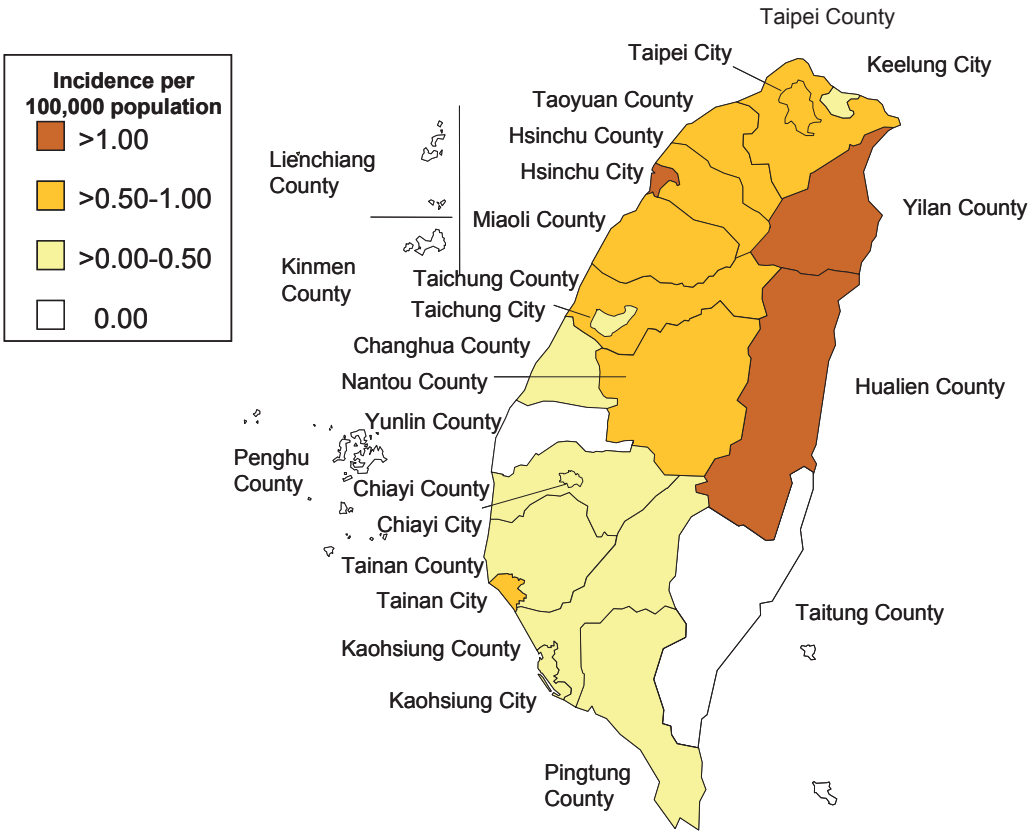


Figure 66 Geographical distribution by incidence of Shigellosis confirmed cases, 2010

Severe Complicated Influenza Case

In 2010, 882 cases of severe complicated influenza case (incidence rate: 3.81 per 100,000 population) were confirmed, which went down as compared with 1,134 confirmed cases (incidence rate: 4.91 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 499 male cases (56.6%) and 383 female cases (43.4%) with male to female ratio of 1.3:1.0.

(2) By age group

There were 373 cases in 65 years and over age group, 208 cases in 40-64 years age group, 114 cases in 25-39 years age group, 77 cases in 5-14 years age group, 69 cases in 15-24 years age group, 37 cases in 1-4 years age group, and 4 cases in 0-1 year age group.

(3) By month

There were confirmed cases occurred in each month of the year where July through September all had more than 100 cases. In all, there were 238 cases in August, 157 cases in September, 122 cases in July, 73 cases in October, 59 cases each in June and December, 57 cases in May, 44 cases in January, 36 cases in November, 14 cases in April, 13 cases in February and 10 cases in March.

(4) By residential region

Taipei County ranked the first with 162 confirmed cases, followed by 109 cases in Hualien County, 76 cases in Kaohsiung City, 68 cases in Kaohsiung County, 59 cases in Taipei City, 51 cases in Tainan City, 48 cases in Tainan County, 43 cases in Taoyuan County, 38 cases in Pingtung County, 32 cases in Changhua County, 31 cases in Chiayi County, and 30 cases in Yunlin County. The other cities and counties all had less than 30 cases, in which Kinmen County and Lienchiang County had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Hualien County (32.07), followed by Tainan City (6.61), and Chiayi County (5.68).

(5) Imported cases and countries of infection

There were 9 imported cases of severe complicated influenza case in 2010, including 6 cases from China, and 1 case from Hong Kong, Belgium, and unknown origin respectively.

(6) By virus type

By virus type, there were 784 cases associated with influenza A virus (579 cases of H3, 185 cases of 2009 pandemic influenza A (H1N1), 19 cases of untyped virus, and 1 case of

simultaneous infection with H3 and 2009 pandemic influenza A (H1N1)), 97 cases associated with influenza B virus, and 1 case of simultaneous infection with AH3 and influenza B.

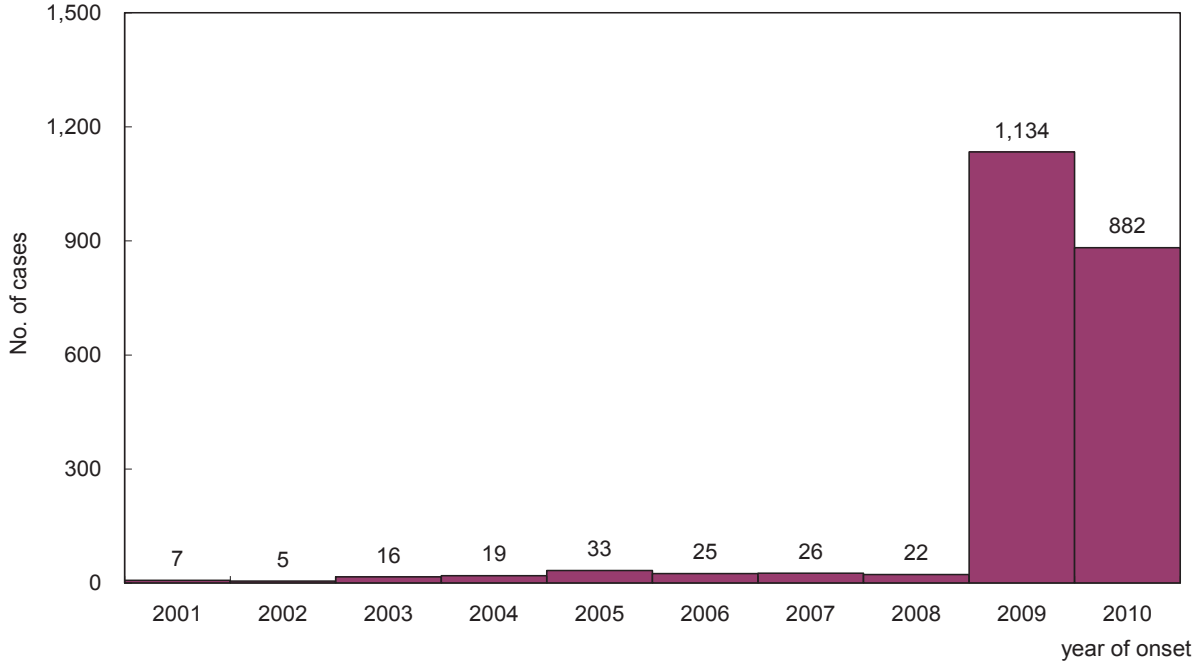


Figure 67 Number of Severe Complicated Influenza Confirmed Cases, 2001-2010

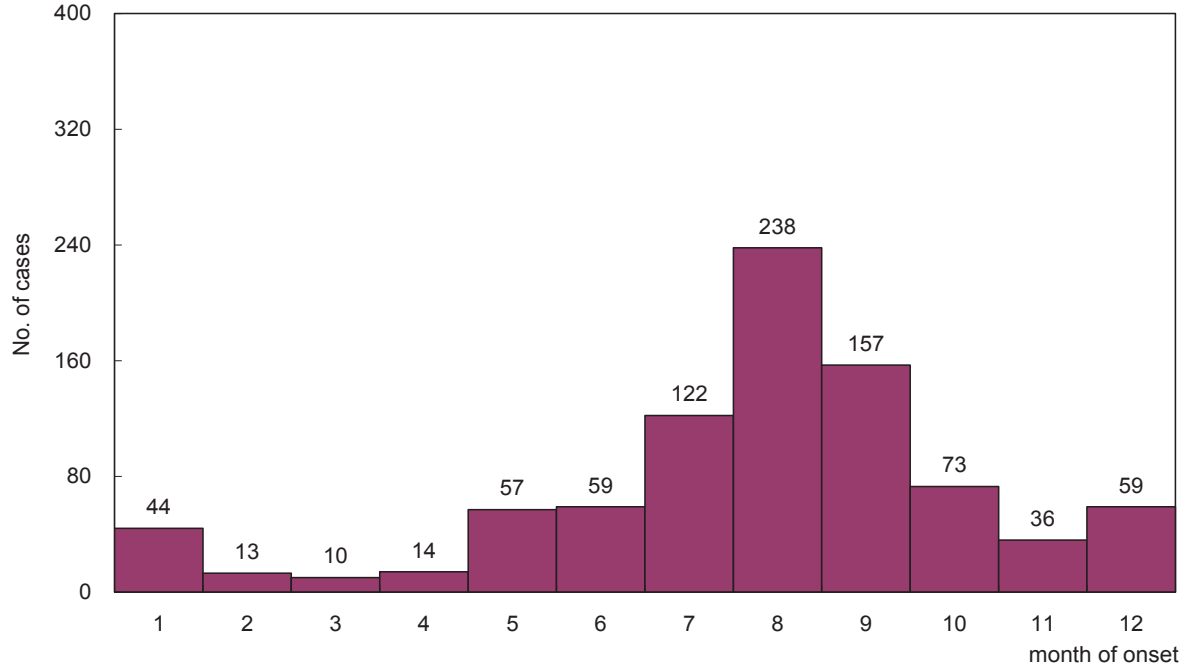


Figure 68 Number of Severe Complicated Influenza Confirmed Cases, 2010

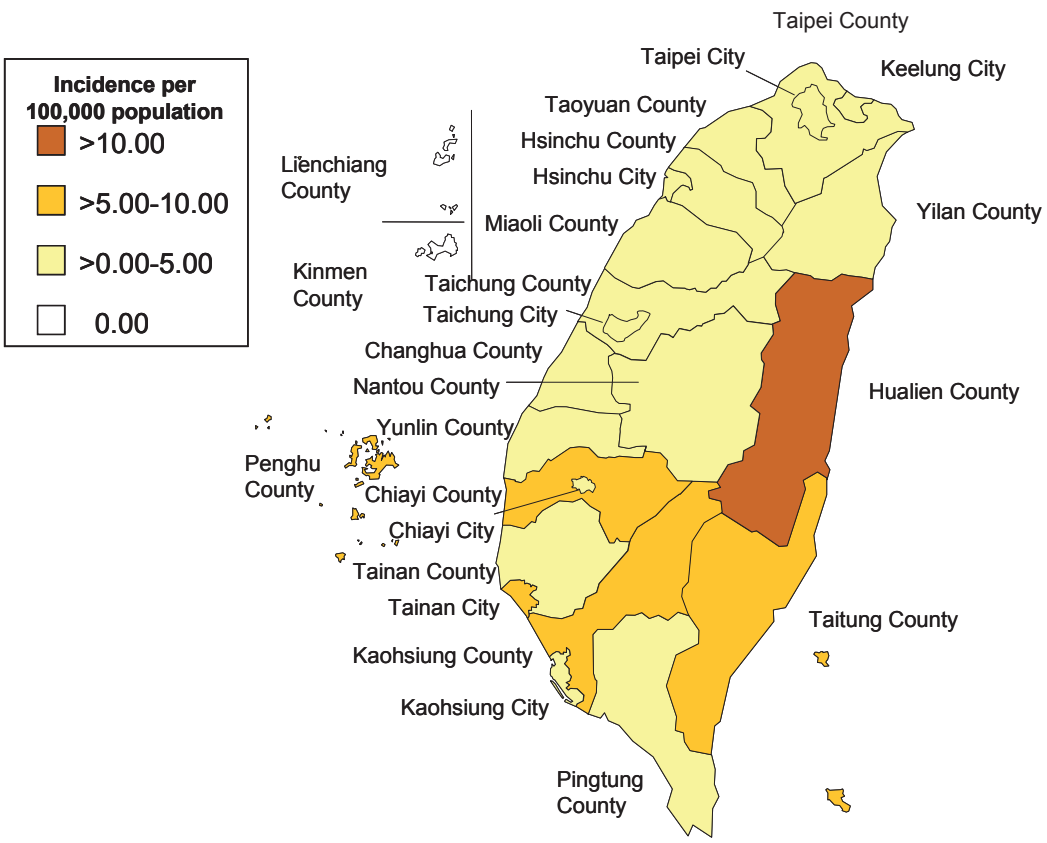


Figure 69 Geographical distributions by incidence of Severe Complicated Influenza Confirmed Case, 2010

Syphilis

In 2010, 6,482 cases of syphilis (incidence rate: 28.01 per 100,000 population) were confirmed, which went down as compared with 6,668 confirmed cases (incidence rate: 28.89 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 4,594 male cases (70.9%) and 1,888 female cases (29.1%) with male to female ratio of 2.4:1.0.

(2) By age group

The cases occurred mostly in 40-64 years age group (2,337 cases; 36.1%), followed by 2,017 cases (31.1%) in 25-39 years age group, 1,391 cases (21.5%) in 65 years and over age group, 713 cases (11.0%) in 15-24 years age group, 3 cases (<0.1%) in 5-14 years age group, and 21 cases (0.3%) in 0-1 year age group.

(3) By month (based on diagnosis date)

There were no specific prevalent months or seasons for syphilis in 2010 and there were confirmed cases occurred in each month of the year.

(4) By residential region

Taipei County ranked the first with 1,320 cases (20.4%), followed by 954 cases (14.7%) in Taipei City, 636 cases (9.8%) in Taoyuan County, 413 cases (6.4%) in Kaohsiung City, 382 cases (5.9%) in Kaohsiung County, 361 cases (5.6%) in Taichung City, and 357 cases (5.5%) in Taichung County. No confirmed cases occurred in Lienchiang County.

The incidence rate of confirmed cases per 100,000 population was the highest in Taipei City (36.51), followed by Hualien County (35.31), Yilan County (34.92), Taipei County (33.97), Taichung City (33.49), Taoyuan County (31.95), Kaohsiung County (30.73), and Keelung City (30.55). The incidence rates of confirmed cases per 100,000 population of the other cities and counties were below 30.00.

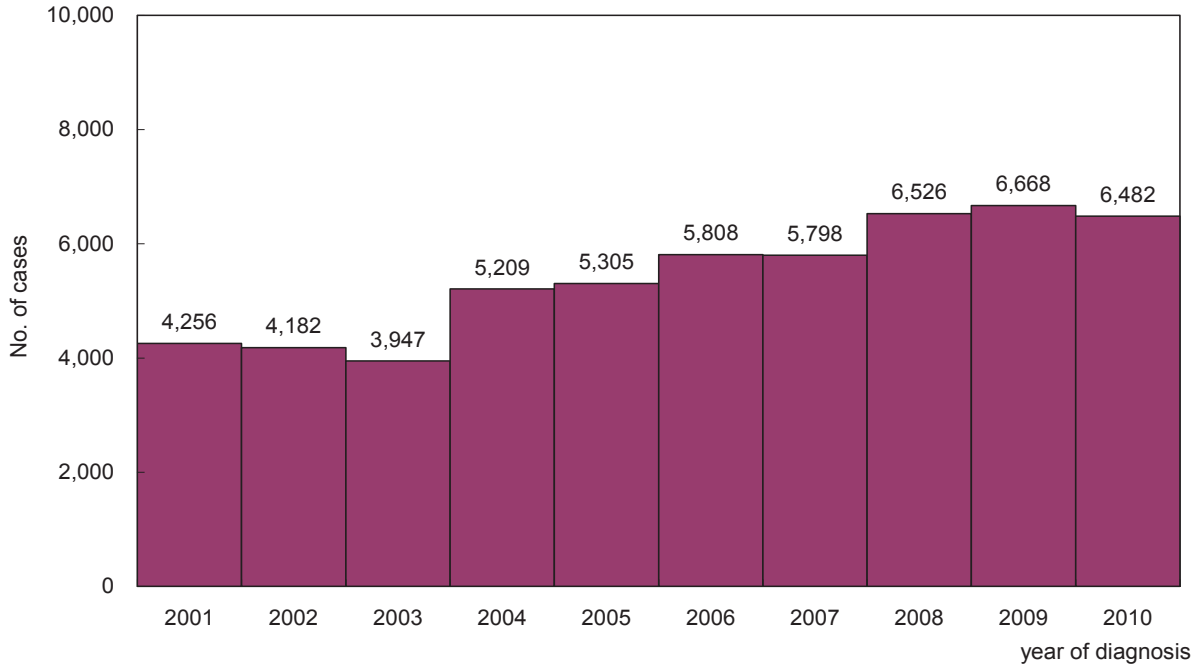


Figure 70 Number of Syphilis confirmed cases, 2001-2010

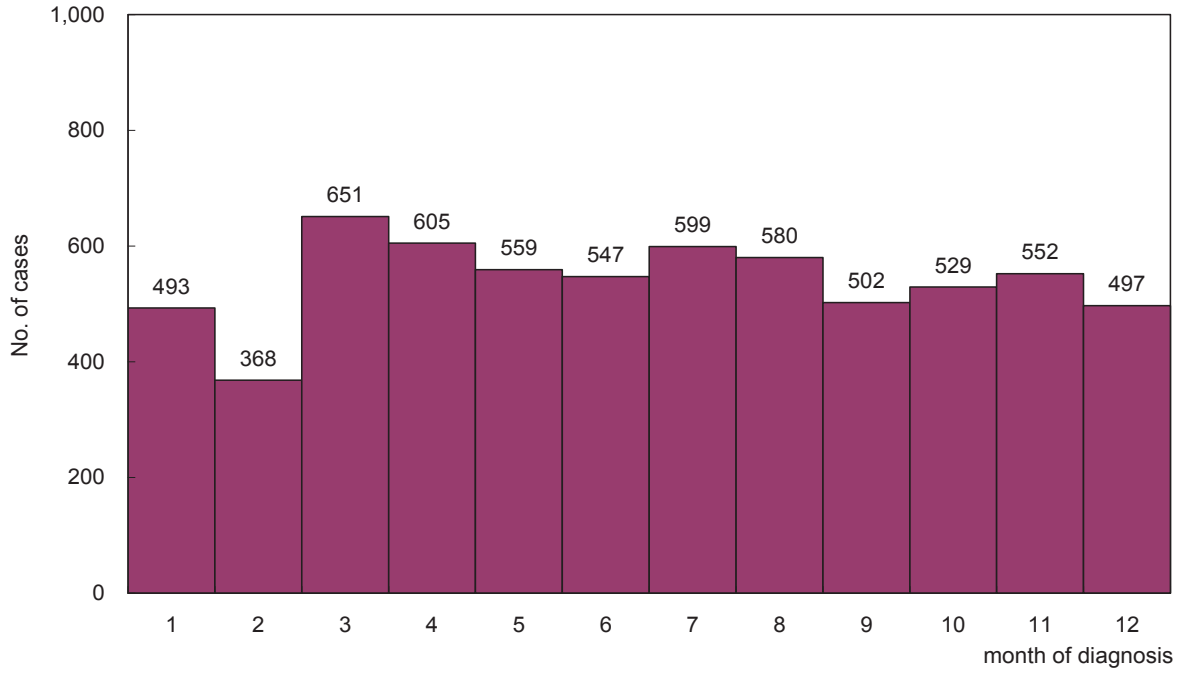


Figure 71 Number of Syphilis confirmed cases, 2010

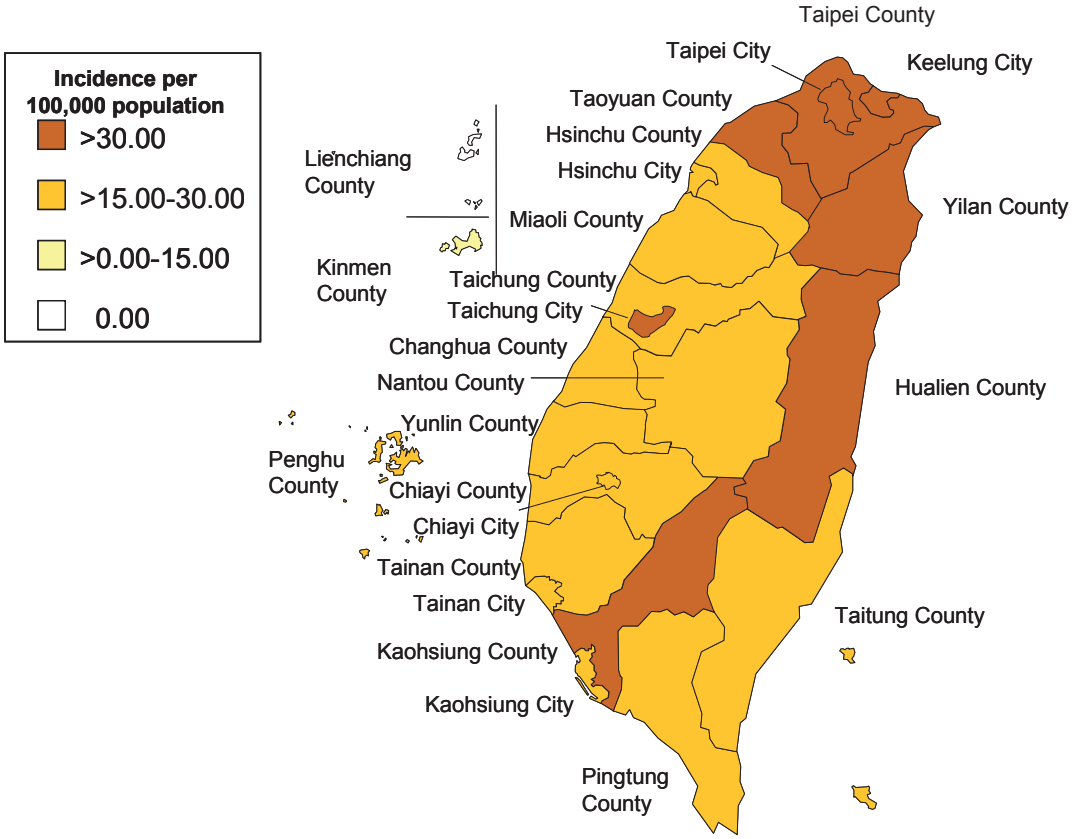


Figure 72 Geographical distribution by incidence of Syphilis confirmed cases, 2010

Gonorrhea

In 2010, 2,265 cases of gonorrhea (incidence rate: 9.79 per 100,000 population) were confirmed, which went up as compared with 2,137 confirmed cases (incidence rate: 9.26 per 100,000 population) in 2009. The data of confirmed cases in 2010 were analyzed as follows:

(1) By gender

There were 2,080 male cases (91.8%) and 185 female cases (8.2%) with male to female ratio of 11.2:1.0.

(2) By age group

The cases occurred mostly in 25-39 years age group (1,290 cases; 57.0%), followed by 588 cases (26.0%) in 15-24 years age group, 358 cases (15.8%) in 40-64 years age group, 26 cases (1.1%) in 65 years and over age group, 2 cases (0.1%) in 5-14 years age group, and 1 case (<0.1%) in 0-1 year age group.

(3) By month (based on diagnosis date)

There were no specific prevalent months or seasons for gonorrhea in 2010, and there were confirmed cases occurred in each month of the year.

(4) By residential region

Taipei County ranked the first with 682 cases (30.1%), followed by 561 cases (24.8%) in Taipei City, 195 cases (8.6%) in Taoyuan County, 78 cases each in Taichung County and Tainan County, 73 cases in Keelung City, 69 cases in Kaohsiung City, 65 cases in Tainan City, 57 cases in Miaoli County, and 55 cases in Hsinchu County. The other cities and counties had less than 50 confirmed cases, in which Lienchiang County had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Taipei City (21.47), followed by Keelung City (18.90), Taipei County (17.55), Hsinchu City (11.37), Hsinchu County (10.74), and Miaoli County (10.15). The incidence rates of confirmed cases per 100,000 population of the other cities and counties were below 10.00.

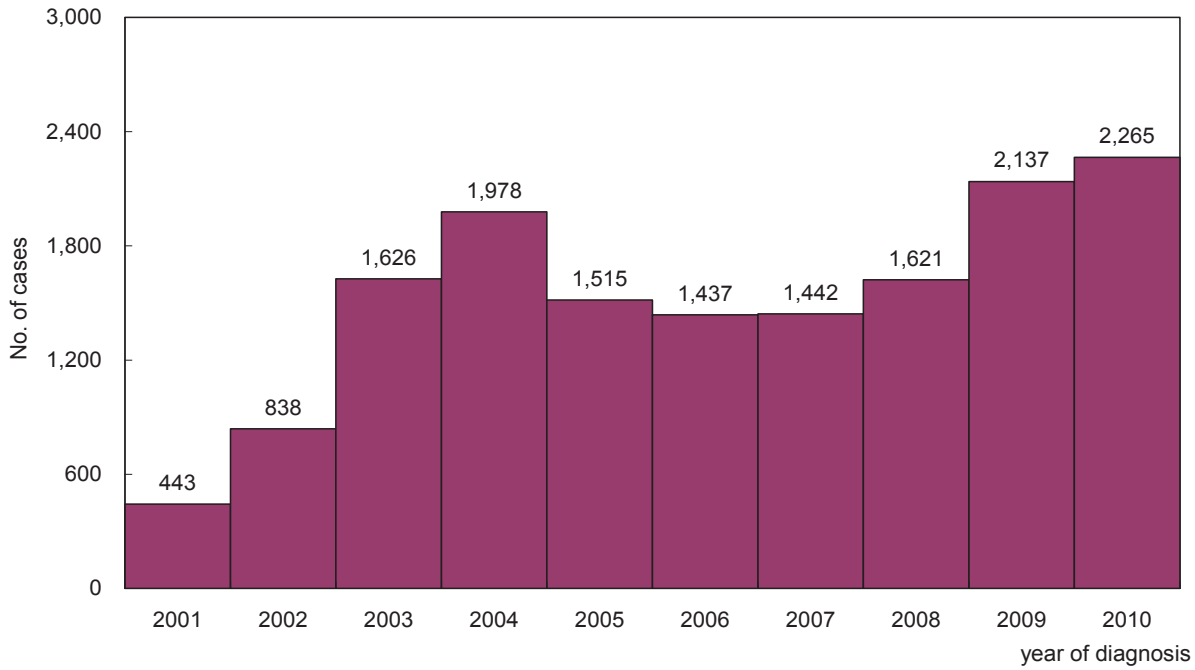


Figure 73 Number of Gonorrhea confirmed cases, 2001-2010

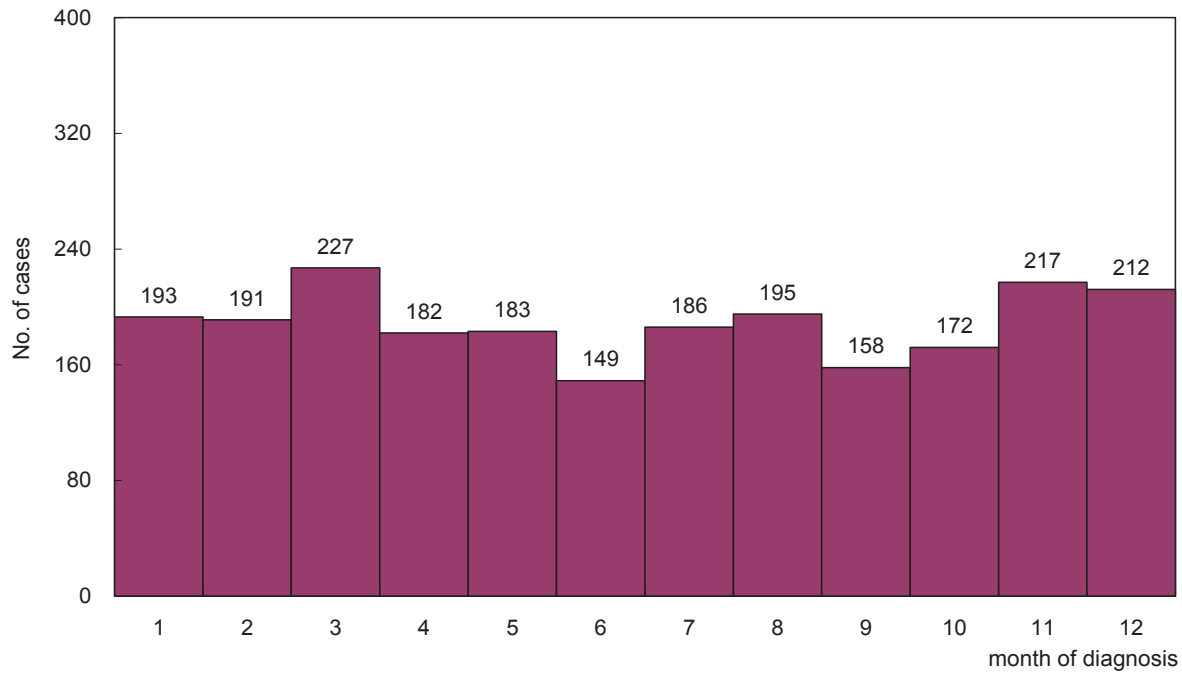


Figure 74 Number of Gonorrhea confirmed cases, 2010

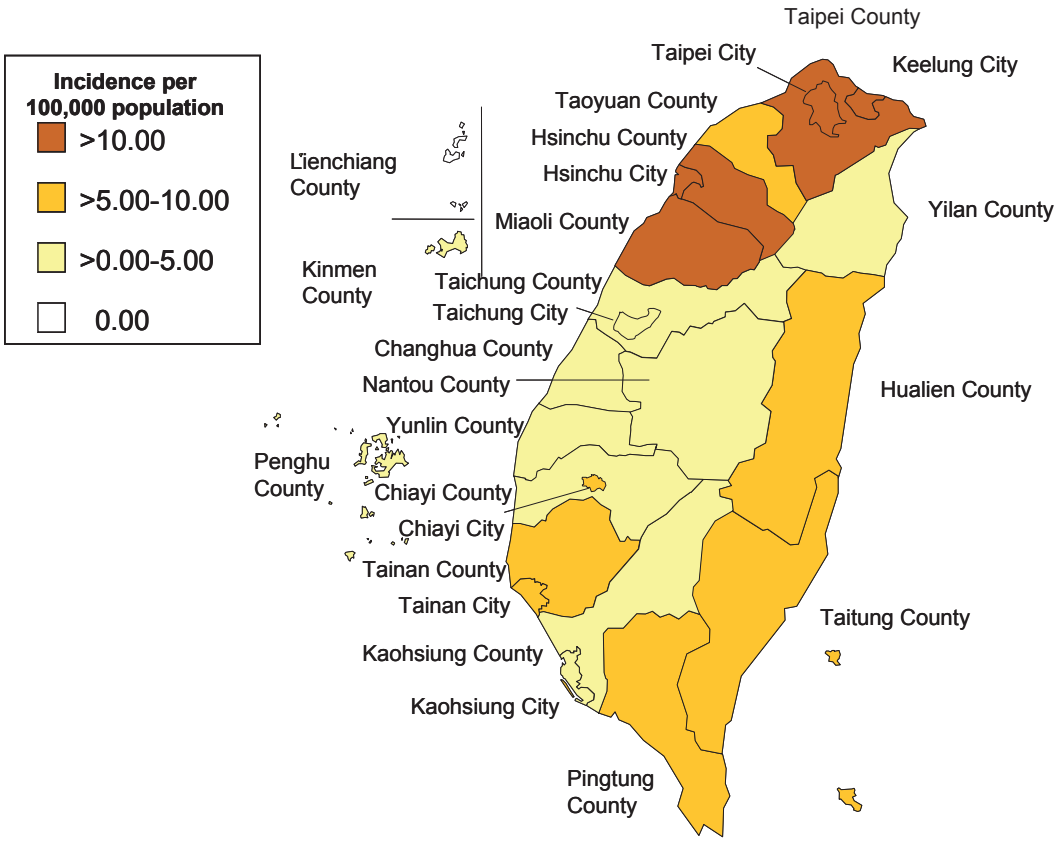


Figure 75 Geographical distribution by incidence of Gonorrhea confirmed cases, 2010

HIV Infection & AIDS

From 1984 up to the end of 2010, there were 20,801 cases of human immunodeficiency virus (HIV) infection (20,057 native cases and 744 foreign cases) and 7,419 AIDS cases (7,333 native cases and 86 foreign cases) were confirmed.

In 2010, 1,868 HIV cases (1,796 native cases and 72 foreign cases) and 1,099 AIDS cases (1,087 native cases and 12 foreign cases) were diagnosed and confirmed. The data of native cases in 2010 were analyzed as follows (the HIV infected cases included AIDS cases):

(1) By gender

HIV: There were 1,730 male cases (96.3%) and 66 female cases (3.7%) with male to female ratio of 26.2:1.0.

AIDS: There were 1,016 male cases (93.5%) and 71 female cases (6.5%) with male to female ratio of 14.3:1.0.

(2) By age group

HIV: There were 975 cases (54.3%) in 25-39 years age group, 468 cases (26.1%) in 15-24 years age group, and 321 cases (17.9%) in 40-64 years age group.

AIDS: There were 591 cases (54.4%) in 25-39 years age group, 349 cases (32.1%) in 40-64 years age group, and 126 cases (11.6%) in 15-24 years age group.

(3) By month (based on diagnosis date)

There were no specific prevalent months or seasons for HIV infection and AIDS in 2010 and there were confirmed cases occurred in each month of the year.

(4) By risk factors

HIV (total): There were 1,275 cases (71.0%) caused by men who have sex with men, 281 cases (15.6%) caused by heterosexual, 105 cases (5.8%) caused by injection drug users, 1 case (0.1%) caused by blood transfusion and 134 cases (7.5%) with unknown causes.

HIV (male): There were 1,275 cases (73.7%) caused by men who have sex with men, 244 cases (14.1%) caused by heterosexual, 88 cases (5.1%) caused by injection drug users, 1 case (0.1%) caused by blood transfusion and 122 cases (7.0%) with unknown causes.

HIV (female): The cases were mostly caused by heterosexual with 37 cases (56.1%), followed by injection drug users with 17 cases (25.7%). There were also 12 female cases (18.2%) with unknown causes.

AIDS (total): There were 589 cases (54.1%) caused by men who have sex with men, 242 cases (22.3%) caused by injection drug users, 215 cases (19.8%) caused by heterosexuals, and 41 cases (3.8%) with unknown causes.

AIDS (male): There were 589 cases (58.0%) caused by men who have sex with men, 209

cases (20.6%) caused by injection drug users, 181 cases (17.8%) caused by heterosexuals, and 37 cases (3.6%) with unknown causes.

AIDS (female): There were 34 cases (47.9%) caused by heterosexuals, 33 cases (46.5%) caused by injection drug users, and 4 cases (5.6%) with unknown causes.

See Tables 28 and 29 for statistics of HIV infected and AIDS by risk factor.

(5) By residential region

HIV: Taipei County ranked the first with 420 cases (23.4%), followed by 299 cases (16.7%) in Taipei City, 179 cases (9.9%) in Taoyuan County, 172 cases (9.6%) in Kaohsiung City, and 129 cases (7.1%) in Taichung City.

The incidence rate of confirmed HIV cases per 100,000 population was the highest in Taichung City (11.97), followed by Taipei City (11.44), and Kaohsiung City (11.25).

AIDS: Taipei County ranked the first with 216 cases (19.8%), followed by 138 cases (12.7%) in Taipei City, 129 cases (11.8%) in Taoyuan County, 88 cases (8.1%) in Kaohsiung City, and 75 cases (6.9%) in Kaohsiung County. Lienchiang County did not have AIDS cases confirmed in 2010.

The incidence rate of confirmed AIDS cases per 100,000 population was the highest in Taichung City (6.77), followed by Taoyuan County (6.48), and Kaohsiung County (6.03).

Table 28 Risk factor of HIV infection confirmed cases (foreigner excluded), 2010

Risk factor	Male	%	Female	%	Total	%
Men who have sex with men	1,275	73.7%	0	0.0%	1,275	71.0%
Heterosexuals	244	14.1%	37	56.1%	281	15.6%
Injecting drug users	88	5.1%	17	25.7%	105	5.8%
Blood recipients	1	0.1%	0	0.0%	1	0.1%
Vertical transmission	0	0.0%	0	0.0%	0	0.0%
Hemophiliacs	0	0.0%	0	0.0%	0	0.0%
Unknown	122	7.0%	12	18.2%	134	7.5%
Total	1,730	100.0%	66	100.0%	1,796	100.0%

Table 29 Risk factor of AIDS confirmed cases (foreigner excluded), 2010

Risk factor	Male	%	Female	%	Total	%
Men who have sex with men	589	58.0%	0	0.0%	589	54.1%
Heterosexuals	181	17.8%	34	47.9%	215	19.8%
Injecting drug users	209	20.6%	33	46.5%	242	22.3%
Blood recipients	0	0.0%	0	0.0%	0	0.0%
Vertical transmission	0	0.0%	0	0.0%	0	0.0%
Hemophiliacs	0	0.0%	0	0.0%	0	0.0%
Unknown	37	3.6%	4	5.6%	41	3.8%
Total	1,016	100.0%	71	100.0%	1,087	100.0%

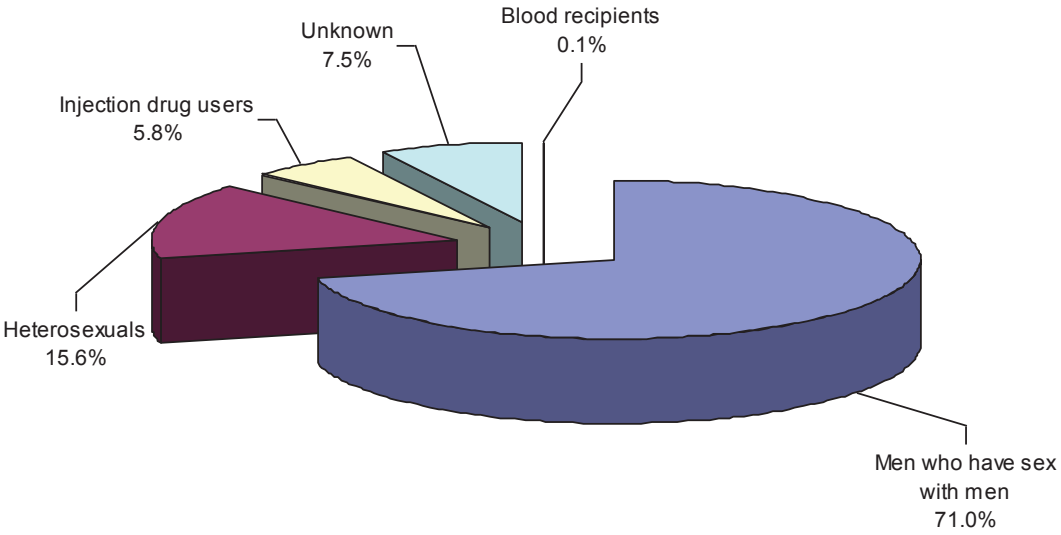


Figure 76 Risk factor of HIV infection confirmed cases (foreigner excluded), 2010

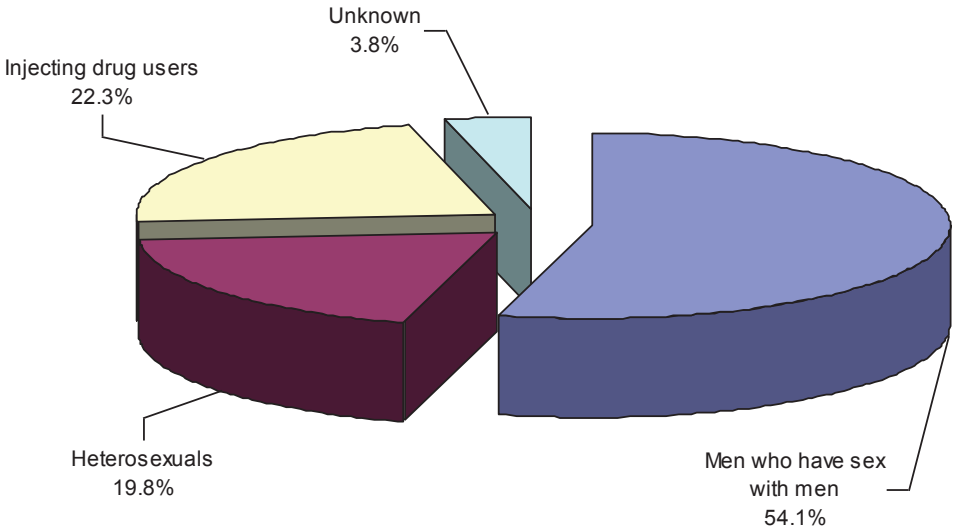


Figure 77 Risk factor of AIDS confirmed cases (foreigner excluded), 2010

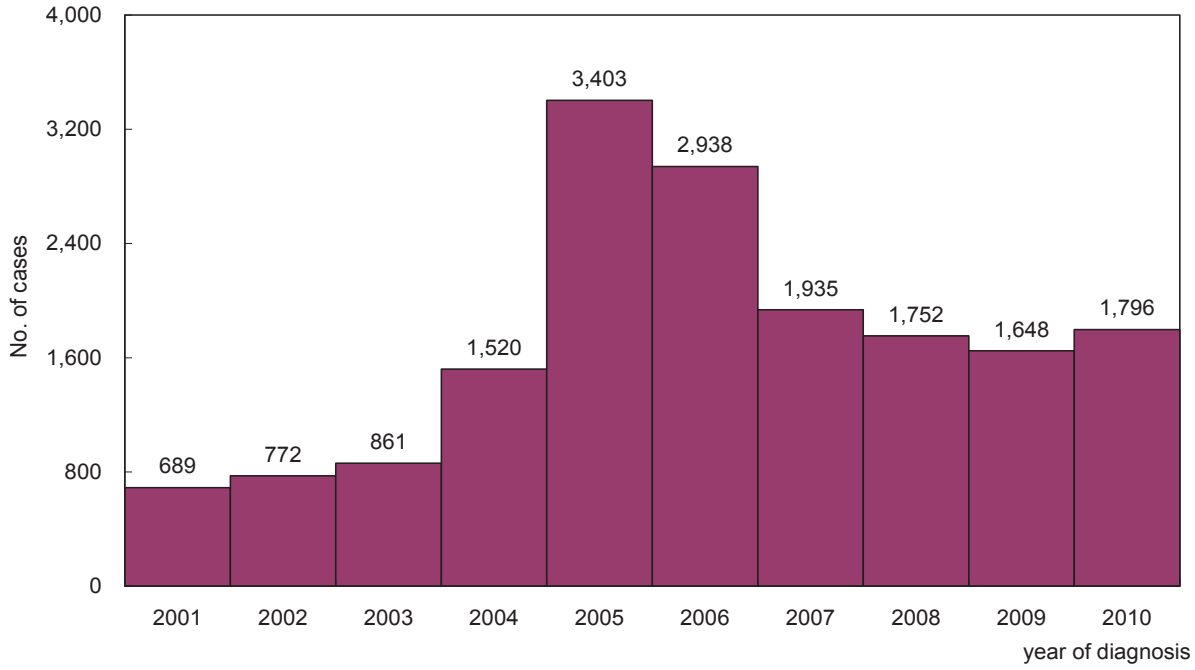


Figure 78 Number of HIV infection confirmed cases (foreigner excluded), 2001-2010

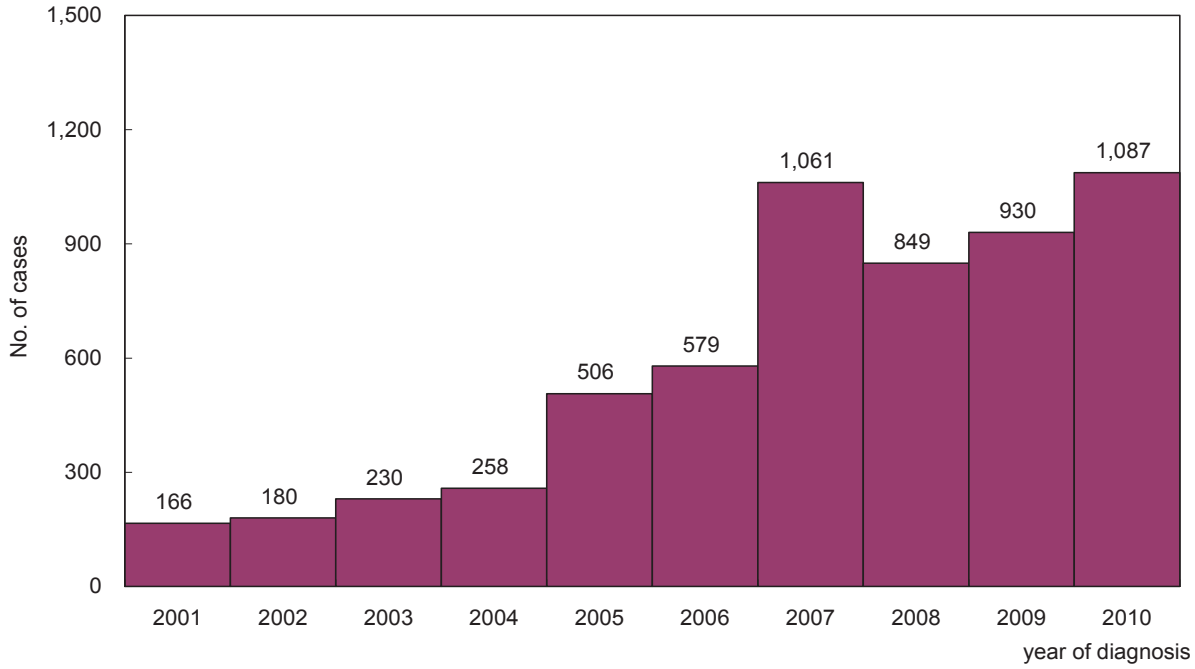


Figure 79 Number of AIDS confirmed cases (foreigner excluded), 2001-2010

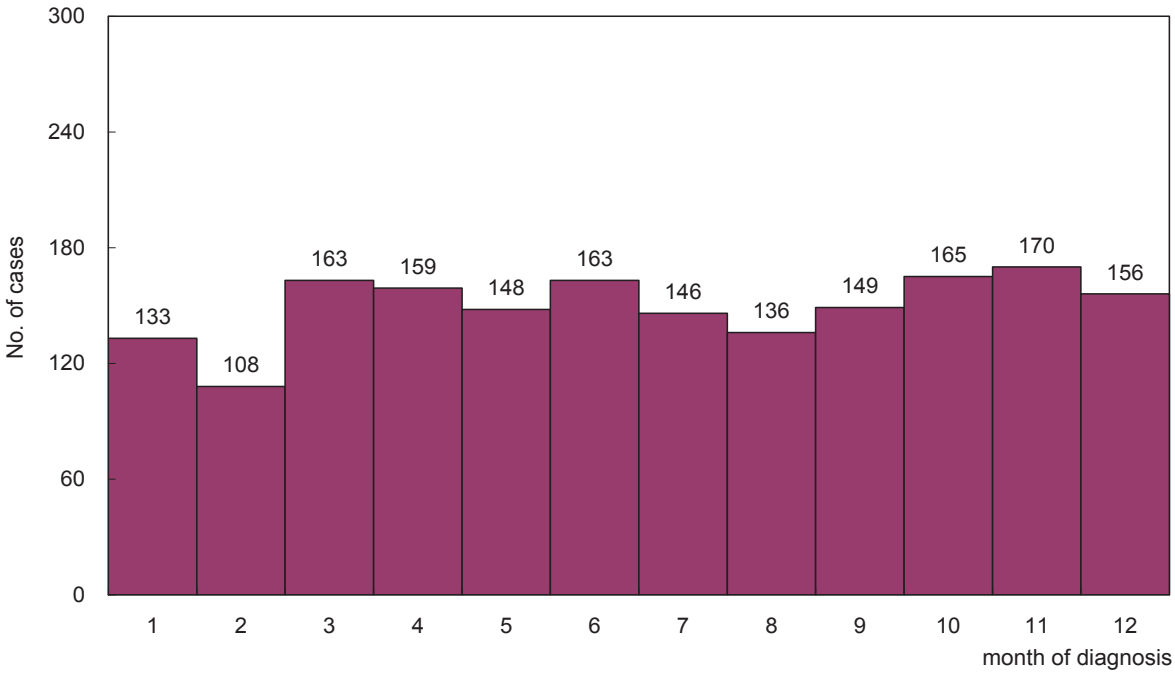


Figure 80 Number of HIV infection confirmed cases (foreigner excluded), 2010

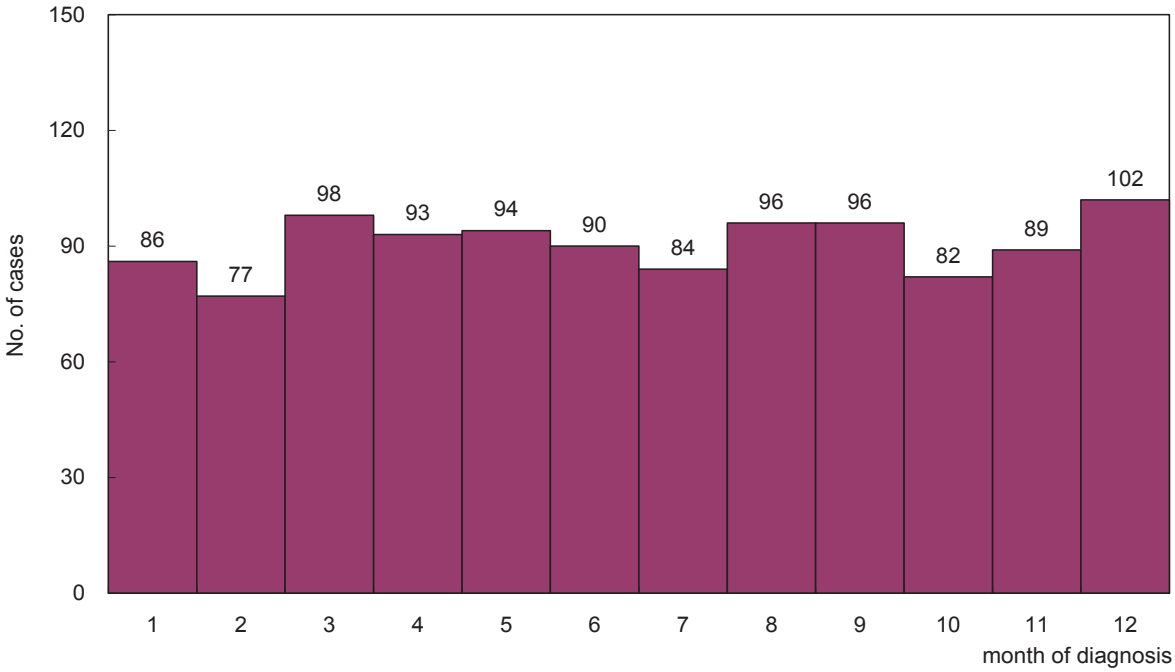


Figure 81 Number of AIDS confirmed cases (foreigner excluded), 2010

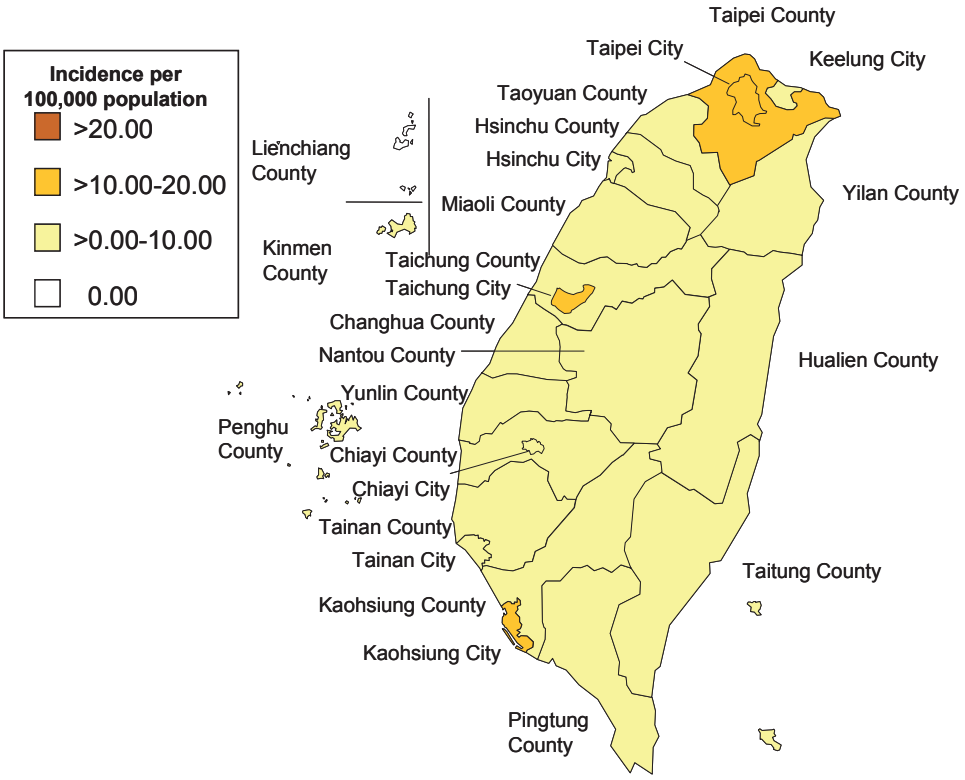


Figure 82 Geographical distribution by incidence of HIV infection confirmed cases (foreigner excluded), 2010

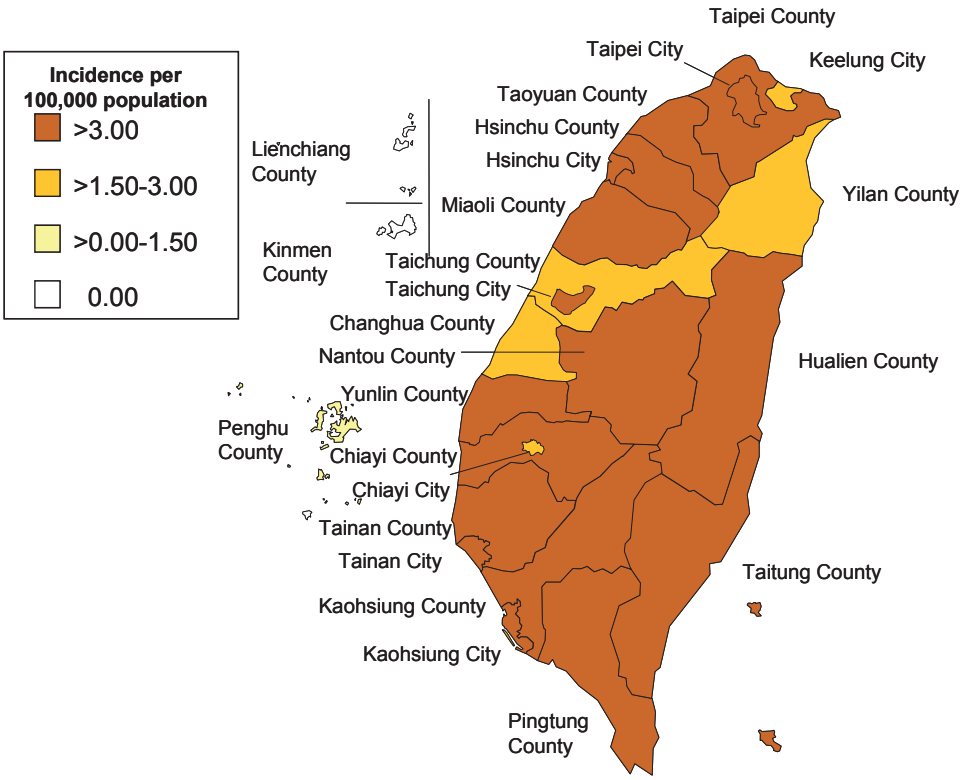


Figure 83 Geographical distribution by incidence of AIDS confirmed cases (foreigner excluded), 2010

Tuberculosis

In 2010, 13,237 cases of tuberculosis (incidence rate: 57.2 per 100,000 population) were confirmed, which went down in both case number and incidence rate as compared with 13,336 confirmed cases (incidence rate: 57.8 per 100,000 population) in 2009. Incident case number decreased 6.5% and rate decreased 1.0%. The data of confirmed TB cases in 2010 were analyzed as follows:

(1) By gender

There were 9,131 male cases (69.0%) and 4,106 female cases (31.0%) with male to female ratio of 2.2:1.0. The incidence rate of tuberculosis in men was 78.5 per 100,000 population and that in women was 35.7. Men's incidence rate was also 2.2 times of women's.

(2) By age group

The number of tuberculosis cases and incidence rate per 100,000 population rose significantly with age. There were 81 cases in 0-14 years age group, 632 cases in 15-24 years age group, 908 cases in 25-34 years age group, 1,046 cases in 35-44 years age group, 1,645 cases in 45-54 years age group, 1,925 cases in 55-64 years age group, and 7,000 (52.9%) cases in 65 years and over age group.

(3) By month (based on notification date)

There were confirmed tuberculosis cases in each month of the year, with the highest number (1,166 cases) in June and lowest number (912 cases) in February.

(4) By residential region

By area, the incidence rate of tuberculosis was higher in eastern area than western area, and higher in southern area than northern area. With regard to incidence rate by city and county, Taitung County and Hualien County had the highest rate with 99.7 per 100,000 population, followed by Pingtung County with 93.8 per 100,000 population. Lienchiang County and Penghu County had the lowest incidence rate with 20.1 and 17.6 per 100,000 population respectively.

(5) Mortality distribution

In 2010 there were 654 tuberculosis deaths with mortality rate 2.8 per 100,000 population, including 476 male death cases and 178 female death cases. The male to female death ratio was 2.7:1.0. The male mortality rate was 4.1 cases per 100,000 population and the female mortality rate was 1.5.

By age group, tuberculosis mortality rate increased as age increased. Of the 654 tuberculosis deaths in 2010, 84% (546 cases) were elderly aged 65 years and over.

By area, the tuberculosis mortality rate was the highest in Taitung County with 8.6 cases per

100,000 population, followed by Hualien County (7.6 cases per 100,000 population) and Kinmen County (6.3 cases per 100,000 population). Overall distribution of tuberculosis deaths in 2010 exhibited a pattern of higher in the east and south and lower in the north.

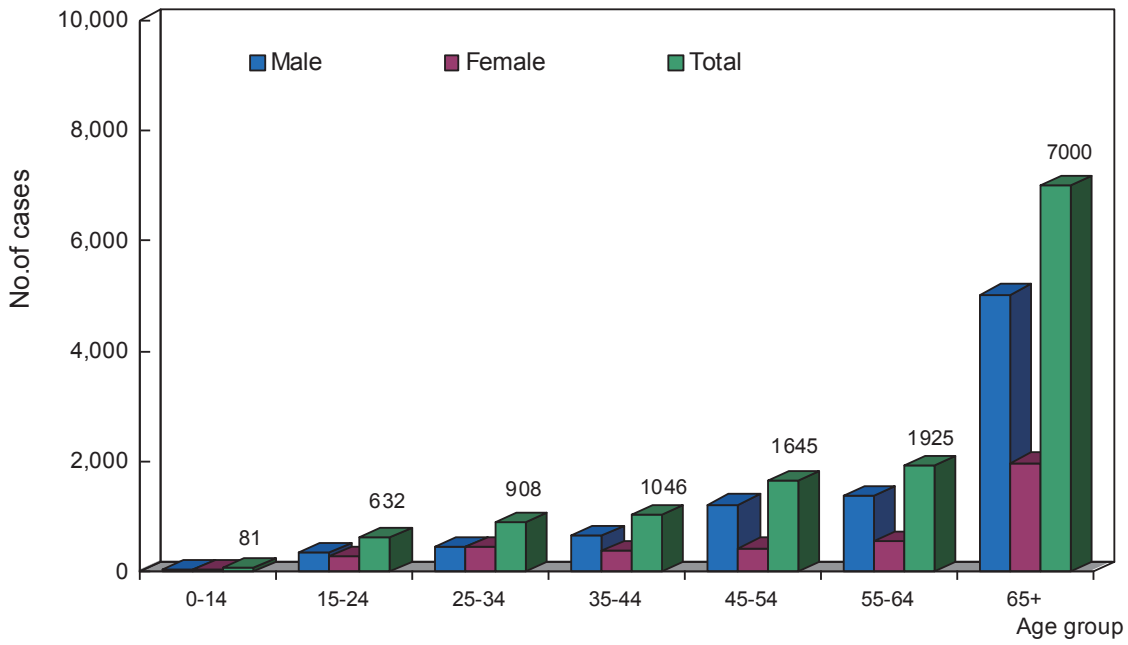


Figure 84 Tuberculosis cases number by age group and sex, 2010

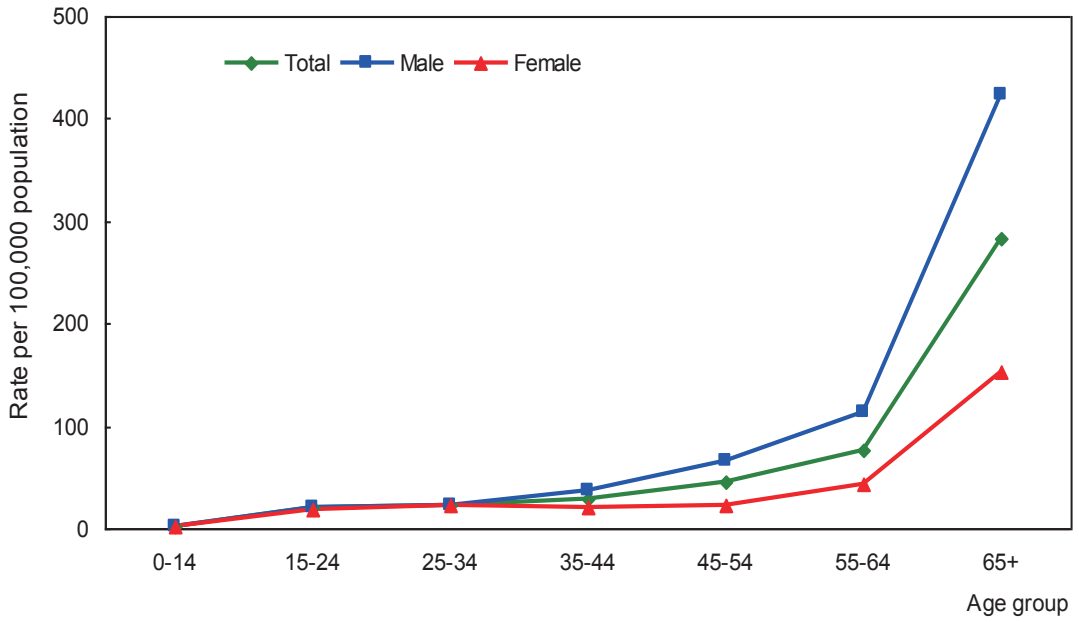


Figure 85 Incidence rate of Tuberculosis by age group and sex, 2010

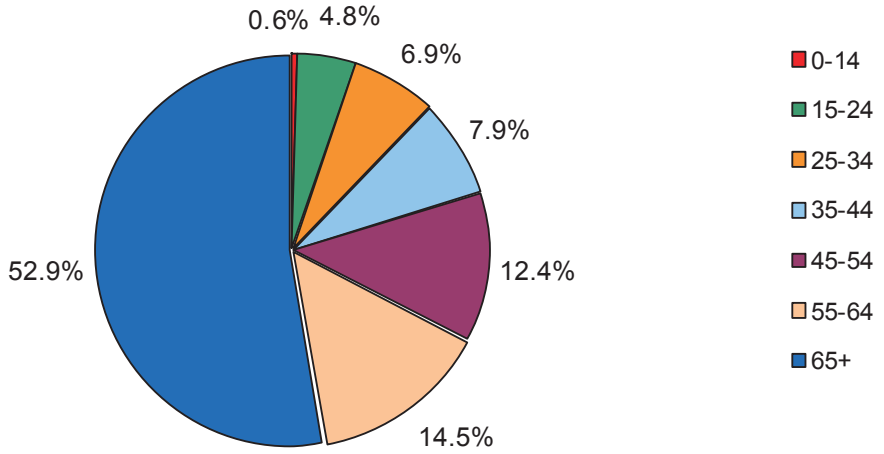


Figure 86 Distribution of Tuberculosis incidence by age group, 2010

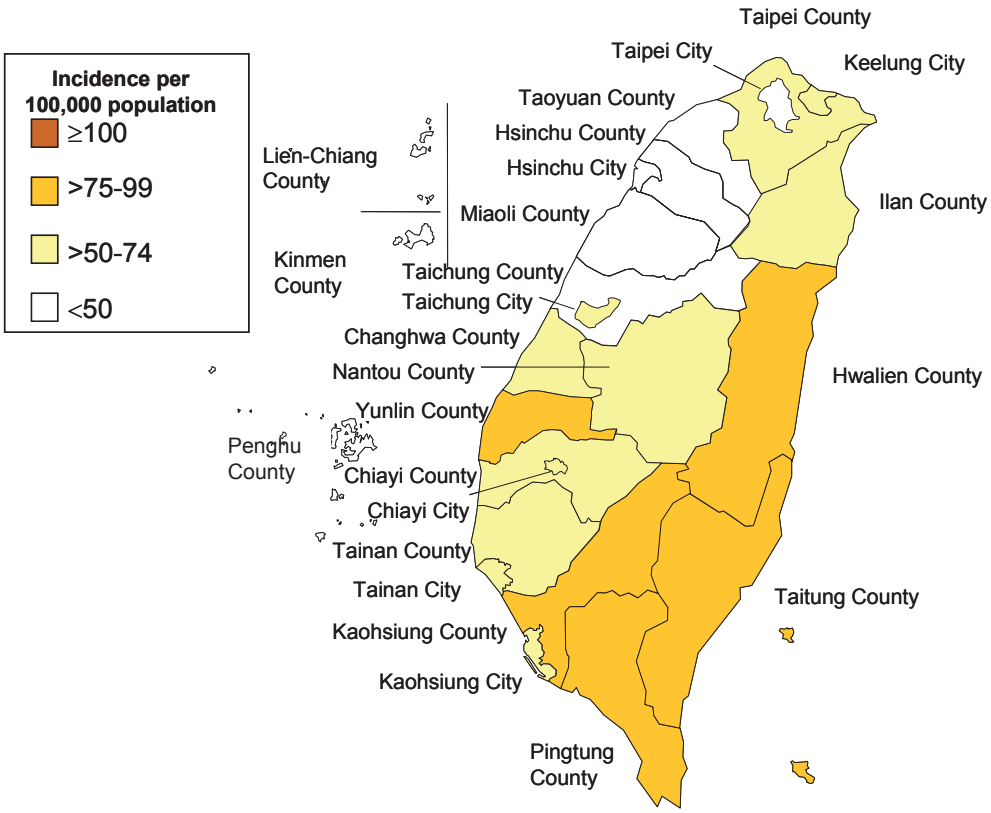


Figure 87 Geographical distribution by incidence of Tuberculosis cases, 2010

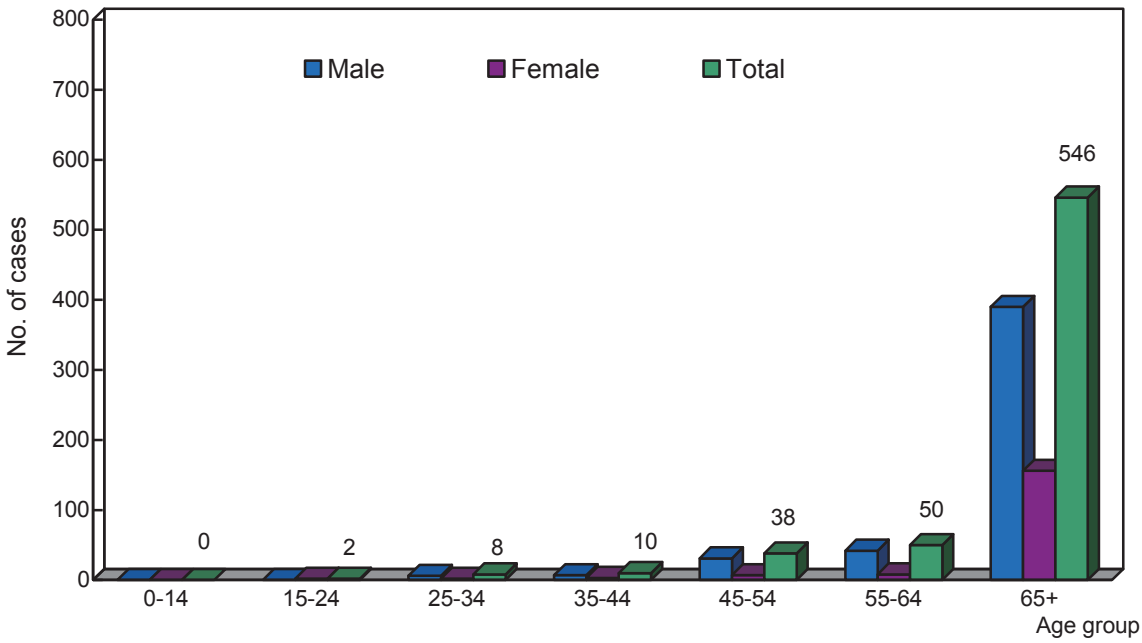


Figure 88 Mortality number of Tuberculosis by age group and sex, 2010

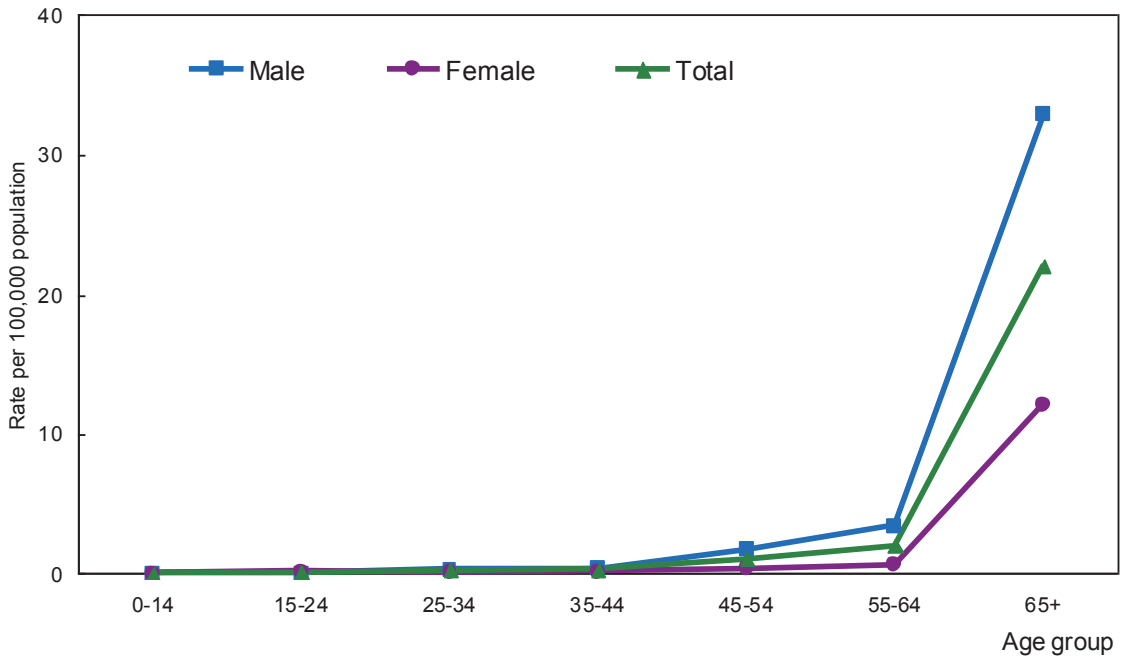


Figure 89 Mortality rate of Tuberculosis by age group and sex, 2010

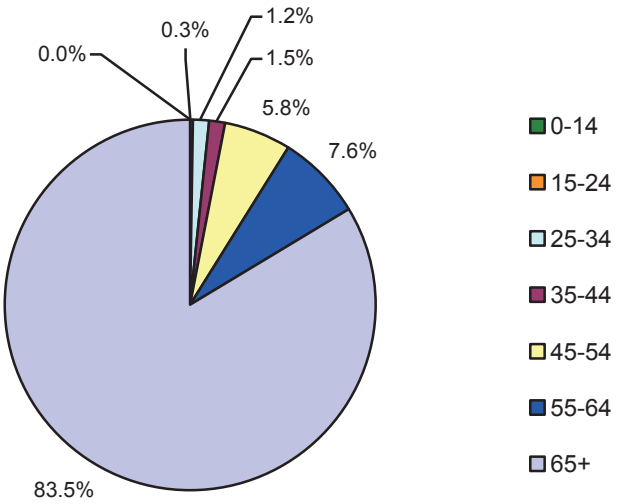


Figure 90 Distribution of Tuberculosis mortality by age group, 2010

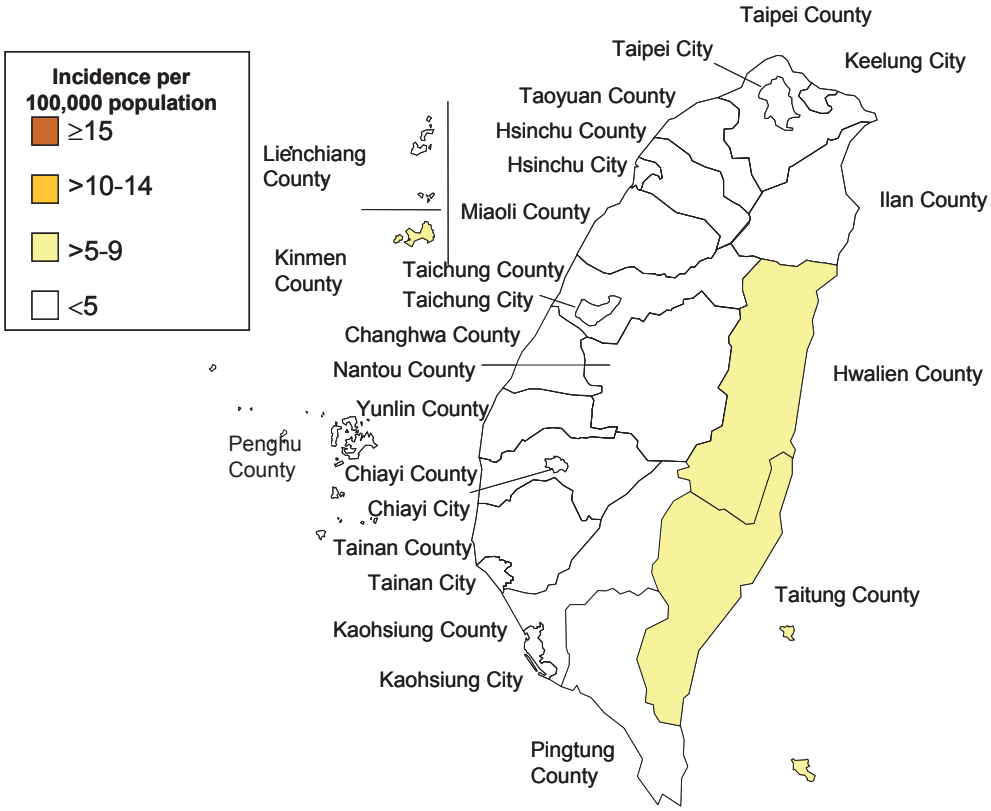


Figure 91 Geographical distribution by mortality of confirmed Tuberculosis cases, 2010

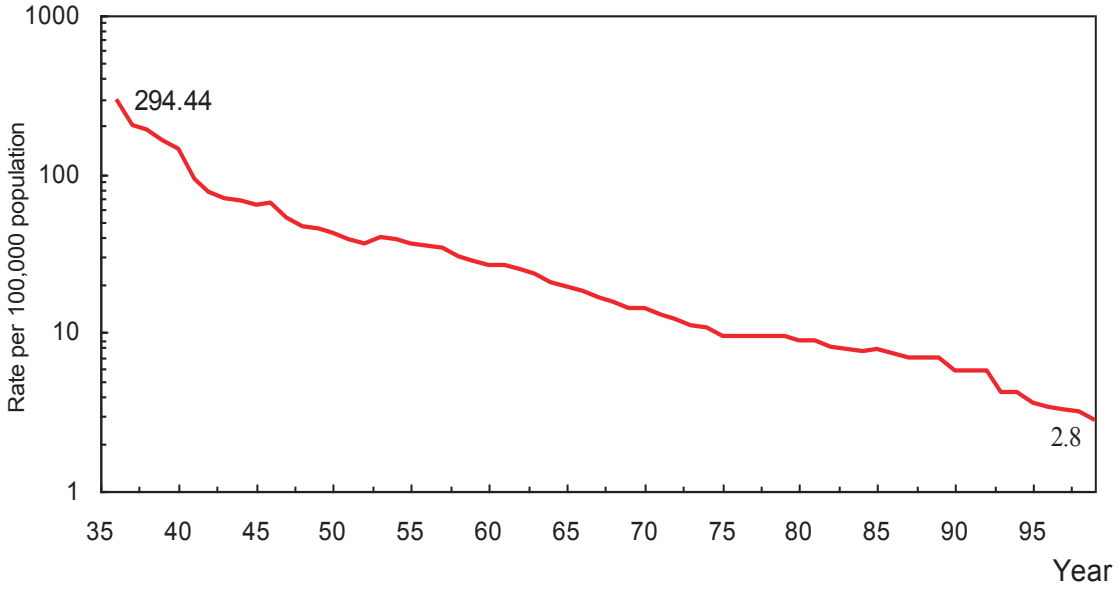


Figure 92 Trend of Tuberculosis mortality rate by year

Table 30 Confirmed tuberculosis cases — by geographical distribution, 2010

Locality	Midyear population	Death number from TB	Per 100,000 population
Taiwan	23,140,948	654	2.8
Taipei County	3,885,510	82	2.1
Yilan County	461,055	11	2.4
Taoyuan County	1,990,421	31	1.6
Hsinchu County	511,948	17	3.3
Miaoli County	561,356	12	2.1
Taichung County	1,564,123	49	3.1
Changhua County	1,309,877	62	4.7
Nantou County	528,658	21	4.0
Yunlin County	720,224	31	4.3
Chiayi County	545,482	18	3.3
Tainan County	1,102,933	33	3.0
Kaohsiung County	1,243,255	45	3.6
Pingtung County	878,074	37	4.2
Taitung County	231,585	20	8.6
Hwalien County	339,884	26	7.6
Penghu County	96,564	2	2.1
Keelung City	386,228	11	2.8
Hsinchu City	413,465	6	1.5
Taichung City	1,077,967	23	2.1
Chiayi City	273,126	4	1.5
Tainan City	771,667	12	1.6
Taipei City	2,613,100	50	1.9
Kaohsiung City	1,528,931	45	2.9
Kinmen County	95,583	6	6.3
Lienchiang County	9,932	-	0.0

Table 31 Mortality of Tuberculosis—by age & sex, 2010

Age	Tuberculosis			Male			Female		
	Midyear population	Death number	Per 100,000 population	Midyear population	Death number	Per 100,000 population	Midyear population	Death number	Per 100,000 population
Total	23,140,948	654	2.8	11,635,980	476	4.1	11,504,968	178	1.5
0-4	983,126	-	0.0	513,206	-	0.0	469,920	-	0.0
5-9	1,207,115	-	0.0	630,783	-	0.0	576,332	-	0.0
10-14	1,510,923	-	0.0	786,811	-	0.0	724,112	-	0.0
15-19	1,613,241	1	0.1	840,193	-	0.0	773,048	1	0.1
20-24	1,588,332	1	0.1	820,165	-	0.0	768,167	1	0.1
25-29	1,918,770	2	0.1	969,209	2	0.2	949,561	-	0.0
30-34	2,005,602	6	0.3	1,001,368	4	0.4	1,004,234	2	0.2
35-39	1,798,349	4	0.2	894,337	2	0.2	904,012	2	0.2
40-44	1,865,280	6	0.3	934,713	5	0.5	930,567	1	0.1
45-49	1,905,171	15	0.8	953,557	12	1.3	951,614	3	0.3
50-54	1,768,061	23	1.3	877,871	19	2.2	890,190	4	0.4
55-59	1,535,186	29	1.9	755,636	25	3.3	779,550	4	0.5
60-64	969,022	21	2.2	472,313	17	3.6	496,709	4	0.8
65+	2,472,770	546	22.1	1,185,818	390	32.9	1,286,952	156	12.1

Table 32 Confirmed tuberculosis cases—by geographical distribution, 2010

Locality	Total					Male					Female				
	Smear-positive	Others	Total	Midyear population	Per 100,000 population	Smear-positive	Others	Total	Midyear population	Per 100,000 population	Smear-positive	Others	Total	Midyear population	Per 100,000 population
Taiwan	5,027	8,210	13,237	23,140,948	57.2	3,641	5,490	9,131	11,635,980	78.5	1,386	2,720	4,106	11,504,968	35.7
Taipei County	761	1,303	2,064	3,885,510	53.1	540	862	1,402	1,931,621	72.6	221	441	662	1,953,889	33.9
Yilan County	130	147	277	461,055	60.1	87	103	190	235,198	80.8	43	44	87	225,857	38.5
Taoyuan County	342	586	928	1,990,421	46.6	254	414	668	1,004,169	66.5	88	172	260	986,252	26.4
Hsinchu County	87	136	223	511,948	43.6	58	100	158	263,676	59.9	29	36	65	248,272	26.2
Miaoli County	87	130	217	561,356	38.7	66	97	163	291,697	55.9	21	33	54	269,659	20.0
Taichung County	248	518	766	1,564,123	49.0	183	325	508	792,957	64.1	65	193	258	771,166	33.5
Changhua County	346	458	804	1,309,877	61.4	239	299	538	672,703	80.0	107	159	266	637,174	41.7
Nantou County	166	227	393	528,658	74.3	116	156	272	272,325	99.9	50	71	121	256,333	47.2
Yunlin County	215	328	543	720,224	75.4	157	219	376	376,330	99.9	58	109	167	343,894	48.6
Chiayi County	126	202	328	545,482	60.1	95	156	251	284,654	88.2	31	46	77	260,828	29.5
Tainan County	224	406	630	1,102,933	57.1	167	307	474	563,200	84.2	57	99	156	539,733	28.9
Kaohsiung County	386	609	995	1,243,255	80.0	278	385	663	636,923	104.1	108	224	332	606,332	54.8
Pingtung County	316	508	824	878,074	93.8	246	339	585	451,846	129.5	70	169	239	426,228	56.1
Taitung County	105	126	231	231,585	99.7	73	76	149	121,326	122.8	32	50	82	110,259	74.4
Hwalien County	171	168	339	339,884	99.7	132	109	241	175,367	137.4	39	59	98	164,517	59.6
Penghu County	3	14	17	96,564	17.6	3	12	15	49,634	30.2	-	2	2	46,930	4.3
Keelung City	106	147	253	386,228	65.5	80	90	170	194,753	87.3	26	57	83	191,475	43.3
Hsinchu City	54	98	152	413,465	36.8	37	63	100	205,441	48.7	17	35	52	208,024	25.0
Taichung City	162	398	560	1,077,967	51.9	111	281	392	524,232	74.8	51	117	168	553,735	30.3
Chiayi City	66	78	144	273,126	52.7	52	46	98	134,508	72.9	14	32	46	138,618	33.2
Tainan City	149	257	406	771,667	52.6	113	171	284	381,880	74.4	36	86	122	389,787	31.3
Taipei City	375	707	1,082	2,613,100	41.4	270	439	709	1,261,502	56.2	105	268	373	1,351,598	27.6
Kaohsiung City	391	635	1,026	1,528,931	67.1	274	426	700	755,118	92.7	117	209	326	773,813	42.1
Kinmen County	11	22	33	95,583	34.5	10	13	23	49,173	46.8	1	9	10	46,410	21.5
Lienchiang County	-	2	2	9,932	20.1	-	2	2	5,747	34.8	-	-	-	4,185	0.0
Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 33 Confirmed tuberculosis cases—by age & sex, 2010

Age	Total					Male					Female				
	Smear-positive	Others	Total	Midyear population	Per 100,000 population	Smear-positive	Others	Total	Midyear population	Per 100,000 population	Smear-positive	Others	Total	Midyear population	Per 100,000 population
Total	5,027	8,210	13,237	23,140,948	57.2	3,641	5,490	9,131	11,635,980	78.5	1,386	2,720	4,106	11,504,968	35.7
0-4	1	15	16	983,126	1.6	1	8	9	513,206	1.8	-	7	7	469,920	1.5
5-9	-	25	25	1,207,115	2.1	-	14	14	630,783	2.2	-	11	11	576,332	1.9
10-14	10	30	40	1,510,923	2.6	4	12	16	786,811	2.0	6	18	24	724,112	3.3
15-19	77	209	286	1,613,241	17.7	42	116	158	840,193	18.8	35	93	128	773,048	16.6
20-24	99	247	346	1,588,332	21.8	48	139	187	820,165	22.8	51	108	159	768,167	20.7
25-29	164	300	464	1,918,770	24.2	81	144	225	969,209	23.2	83	156	239	949,561	25.2
30-34	156	288	444	2,005,602	22.1	93	138	231	1,001,368	23.1	63	150	213	1,004,234	21.2
35-39	178	276	454	1,798,349	25.2	108	166	274	894,337	30.6	70	110	180	904,012	19.9
40-44	272	320	592	1,865,280	31.7	203	187	390	934,713	41.7	69	133	202	930,567	21.7
45-49	324	421	745	1,905,171	39.1	260	286	546	953,557	57.3	64	135	199	951,614	20.9
50-54	389	511	900	1,768,061	50.9	312	359	671	877,871	76.4	77	152	229	890,190	25.7
55-59	426	591	1,017	1,535,186	66.2	339	392	731	755,636	96.7	87	199	286	779,550	36.7
60-64	362	546	908	969,022	93.7	282	370	652	472,313	138.0	80	176	256	496,709	51.5
65+	2,569	4,431	7,000	2,472,770	283.1	1,868	3,159	5,027	1,185,818	423.9	701	1,272	1,973	1,286,952	153.3

Table 34 Confirmed tuberculosis cases—by aboriginal locality / township, 2010

Locality	Township	Smear-positive	Others	Total	Midyear population	Per 100,000 population
Total		218	209	427	200,954	212.5
Kaohsiung County	Maolin Township	2	-	2	1,863	107.4
Yilan County	Nanao Township	16	11	27	6,041	446.9
Hualien County	Sioulin Township	33	19	52	15,175	342.7
Nantou County	Renai Township	32	33	65	15,656	415.2
Taitung County	Yanping Township	6	3	9	3,610	249.3
Yilan County	Datong Township	4	6	10	5,995	166.8
Hualien County	Wanrong Township	9	8	17	6,929	245.3
Hualien County	Jhuosi Township	21	10	31	6,384	485.6
Hsinchu County	Jianshih Township	12	8	20	8,395	238.2
Pingtung County	SandimenTownship	6	9	15	7,564	198.3
Pingtung County	Shihzih Township	1	1	2	4,928	40.6
Pingtung County	Majia Township	7	7	14	6,541	214.0
Taitung County	Haiduan Township	6	8	14	4,523	309.5
Hsinchu County	Wufong Township	5	8	13	4,670	278.4
Kaohsiung County	Taoyuan Township	2	2	4	4,797	83.4
Taoyuan County	Fusing Township	11	10	21	10,641	197.3
Chiayi County	Alishan Township	2	5	7	6,225	112.4
Taichung County	Heping Township	2	8	10	10,737	93.1
Nantou County	Sinyi Township	19	9	28	17,337	161.5
Miaoli County	Taian Township	4	5	9	5,966	150.9
Taipei County	Wulai Township	3	5	8	5,780	138.4
Taitung County	Jinfong Township	1	4	5	3,543	141.1
Pingtung County	Laiyi Township	4	10	14	7,823	179.0
Taitung County	Daren Township	2	4	6	4,099	146.4
Pingtung County	Chunrih Township	1	3	4	4,844	82.6
Pingtung County	Taiwu Township	4	7	11	5,110	215.3
Kaohsiung County	Namaxia Township	-	1	1	3,429	29.2
Pingtung County	Mudan Township	2	4	6	4,999	120.0
Pingtung County	Wutai Township	1	1	2	2,947	67.9
Taitung County	Lanyu Township	-	-	-	4,403	0.0

IV Appendix

—Republic of China (Taiwan), 2010

◎Abbreviations and Symbols Used in Table

— No reported cases.

… Not under surveillance.

Appendix 1

List of cases number update

Year	Measles		Hantavirus syndrome				Hansen's Disease		Acute Hapatitis B	
			Hemorrhagic fever with renal syndrome		Hantavirus pulmonary syndrome					
	reported	confirmed	reported	confirmed	reported	confirmed	reported	confirmed	reported	confirmed
2001	50	10	2	2	2	2	2	2	367	355
2002	79	24	-	-	-	-	8	8	417	417
2003	59	6	-	-	-	-	9	9	334	327
2004	36	-	3	3	-	-	9	9	379	378

Note：The case numbers marked in red is currently updated.

Year	Acute Hepatitis E		Mumps		Varicella		HIV Infection		AIDS	
	reported	confirmed	reported	confirmed	reported	confirmed	reported	confirmed	reported	confirmed
2001	1	1	444	-	5,316	-	689	689	166	166
2002	13	12	665	-	13,073	-	772	772	180	180
2003	12	11	676	-	12,273	-	861	861	230	230
2004	36	18	1,081	-	13,219	-	1,520	1,520	258	258

Note：1. Before 2002, the cases of HIV Infection and AIDS were contained domestic citizens and foreigners, after that, the cases did not include foreign nationality.
2. The caseload of HIV infection and AIDS were estimated by the date of diagnosis.
3. The case numbers marked in red is currently updated.

Appendix 2

Regulations for notifiable disease

Category	Diseases	Reported Within	Mandatory Isolation	Legal Basis*
I	Smallpox, Plague, Severe Acute Respiratory Syndrome, Rabies, Anthrax, Human Infections with Influenza A(H5N1) Virus	24 hours	Isolation care at designated isolation care institution	1、2、6
II	Diphtheria, Typhoid Fever, Dengue Fever / Dengue Haemorrhagic Fever / Dengue Shock Syndrome, Meningococcal Meningitis, Paratyphoid Fever, Poliomyelitis (AFP), Shigellosis, Amoebiasis, Malaria, Measles, Acute Hepatitis A, Enterohaemorrhagic *E. coli* Infection, Hantavirus Syndrome, Cholera, Rubella, Multidrug-Resistant Tuberculosis, Chikungunya Fever, West Nile Fever, Epidemic Typhus Fever	24 hours	When necessary, patients may be placed in designated isolation care institutions for isolation care.	1、2
III	Pertussis, Tetanus, Neonatal Tetanus, Japanese Encephalitis, Tuberculosis (except MDR-TB),Congenital Rubella Syndrome, Acute Hepatitis B, Acute Hepatitis C, Acute Hepatitis D, Acute Hepatitis E, Acute Hepatitis (unspecified), Mumps, Legionellosis, Invasive Haemophilus Influenzae Type b Infection, Syphilis, Gonorrhea, Enteroviruses Infection with Severe Complications, Hansens's disease	one week	When necessary, patients may be placed in designated isolation care institutions for isolation care.	1、2、4、5
	HIV Infection, AIDS	24 hours		3、5
IV	Herpesvirus B Infection, Leptospirosis, Melioidosis, Botulism, NDM-1 Enterobacteriaceae	24 hours	When necessary, patients may be placed in designated isolation care institutions for isolation care.	1、2、6、7
	Invasive Pneumococcal Disease, Q Fever, Endemic Typhus Fever, Lyme Disease, Tularemia, Scrub Typhus, Varicella, Cat-Scratch Disease, Toxoplasmosis, Severe Complicated Influenza Case	one week		
	Creutzfeldt-Jakob Disease	one month		
V	Rift Valley Fever, Marburg Haemorrhagic Fever, Yellow Fever, Ebola Haemorrhagic Fever, Lassa Fever	24 hours	Isolation care at designated isolation care institution	1、2

*Note：

1. "The Communicable Disease Control Act" amended in 77 articles and promulgated on July 18, 2007.
2. "Categories of Communicable Diseases and Prophylaxis of Category IV and V" announced by the Department of Health, the Executive Yuan, on October 9, 2007.
3. “HIV Infection Control and Patient Rights Protection Act“ amended in 27 articles and promulgated on July 11, 2007. (original title : AIDS Prevention and Control Act)
4. "Hansen's disease Patients Human Rights Protection and Compensation Act" promulgated on August 13, 2008.
5. "Categories of Communicable Diseases and Prophylaxis of Category IV and V" announced and amended by the Department of Health, the Executive Yuan, on October 24, 2008.
6. "Categories of Communicable Diseases and Prophylaxis of Category IV and V" announced and amended by the Department of Health, the Executive Yuan, on June 19, 2009.
7. "Categories of Communicable Diseases and Prophylaxis of Category IV and V" announced and amended by the Department of Health, the Executive Yuan, on September 9, 2010.

Appendix 3

Report of cases of communicable and emerging infectious disease, include suspected cases

Please protect patient's privacy

Hospital	Hospital/Clinic		Code No.		Tel	
	Diagnosed by Physician		Address of Hospital/Clinic			

This form shall be in two copies; one copy is for the Health Bureau.

※For outbreaks of communicable diseases or important communicable diseases (in red), please notify in advance the local health bureau by telephone or FAX, and then fill in and send this report. Diseases in red must be reported in 24 hours. Diseases in black shall be reported in one week. Diseases in green must be reported in one month. Diseases in blue are non-notifiable diseases, suspected cases must be reported as soon as possible.

I. The Patient

Name		Sex	☐Male ☐Female	Date of Birth	(Y) (M) (D)	I.D. Number / Passport Number
Nationality	☐ National ☐Other_____ Residence：☐Alien Labor☐Alien Identity：☐Mainland Chinese ☐Alien Bride ☐Mainland Bride	Tel	Office / Home / Mobil			Marital Status ☐Single ☐Married ☐Widowed☐Divorced
Address		Occupation		Animal contact (within 3 months) ☐ No ☐ Yes		

II. Medical Record and Date

Medical Record No.		Date of Onset	(Y) (M) (D)	Travel history(within 3 months) ☐ No ☐ Yes, place：_____		
Major Symptoms		Date of Diagnosis	(Y) (M) (D)	From：(Y) (M) (D) To：(Y) (M) (D)		
Hospital Care	☐ Yes ☐ No ☐ Referred (Date:) to _____Hospital/Clinic	Specimen Collection	☐Yes ☐No	Date of Death	(Y) (M) (D)	
Date Reported	(Y) (M) (D)	Date Received by Health Bureau	(Y) (M) (D)	Date Received by CDC	(Y) (M) (D)	

III. The Disease

Category I Communicable Diseases

☐Smallpox ☐Plague
☐Severe Acute Respiratory Syndrome
☐Rabies ☐Anthrax
☐H5N1 Influenza

Category II Communicable Diseases

☐Diphtheria ☐Typhoid Fever
☐Dengue Fever
☐Dengue Hemorrhagic Fever / Dengue Shock Syndrome
☐Meningococcal Meningitis
☐Paratyphoid Fever
☐Poliomyelitis
☐Acute Flaccid Paralysis
☐Shigellosis ☐Amoebiasis
☐Malaria ☐Measles
☐Acute Hepatitis A
☐EHEC (Enterohaemorrhagic *E. coli*) Infection
Hantavirus Syndrome
☐Hemorrhagic Fever with Renal Syndrome
☐Hantavirus Pulmonary Syndrome
☐Cholera ☐Rubella
☐MDR-TB ☐Chikungunya Fever
☐West Nile Fever ☐Typhus

Category III Communicable Diseases

☐Pertussis ☐Tetanus
☐Japanese Encephalitis
☐Tuberculosis
☐Congenital Rubella Syndrome
Acute Hepatitis(except Hepatitis A)
☐Type B ☐Type C ☐Type D ☐Type E
☐Unspecified (070x)
☐Mumps ☐Legionellosis
☐Invasive Haemophilus Influenzae Type b Infection
☐Syphilis ☐Gonorrhea
☐Neonatal Tetanus
☐Enteroviruses Infection with Severe Complications
AIDS
☐HIV infection
☐AIDS
Specify risk factors for HIV/AIDS infection：
_____
Confirmation Unit of Western Blot：
_____
Confirmation Unit of RT-PCR：
_____
Confirmation Unit of DNA-PCR：
_____
☐Hansen's Disease

Category IV Communicable Diseases

☐Herpesvirus B Infection
☐Leptospirosis ☐Melioidosis
☐Botulism
☐NDM-1 Enterobacteriaceae
☐Invasive Pneumococcal Disease
☐Q fever ☐Murine Typhus
☐Lyme Disease ☐Tularemia
☐Scrub Typhus ☐Varicella
☐Cat-Scratch Disease
☐Toxoplasmosis
☐Severe Complicated Influenza Case
☐**Creutzfeldt-Jakob disease**

Category V Communicable Diseases

☐Rift Valley Fever
☐Marburg Haemorrhagic Fever
☐Yellow Fever
☐Ebola Haemorrhagic Fever
☐Lassa Fever

☐Others _____

IV. Remarks

1. Tuberculosis：☐Acid fast stain：☐ Positive ☐ Negative ☐ Not tested ☐ Tested but not detected，Date of Testing:_____(y/m/d)
☐TB culture：☐ Positive ☐ Negative ☐ Not tested ☐ Tested but not detected，Date of Testing: _____(y/m/d)
☐Typical tuberculosis pathology report，Date of Testing：_____(y/m/d)，☐pleural effusion
☐Chest and other X-ray examination：☐Normal☐No cavity☐With cavity，Date of Examination:_____(y/m/d)；
2. Testing result by reported hospital：

For Health Agency

Signed by Person-in-charge		Signed by Section Chief	

Express Mail

Reply Letter

Floor __ No __ Alley __ Lane___ Section ___ Road / Street _____
_____ Township / District _____ County / City

To：_____Health Bureau, Disease Control Section
Floor __ No __ Alley __ Lane___ Section ___ Road / Street _____
_____ Township / District _____ County / City

Instructions for filling in the report：

(1) According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-0990001077 dated September 9, 2010 of the Department of Health, NDM-1 Enterobacteriaceae infection is included in the list of Class 4 Notifiable Communicable Diseases and the reporting deadline, reporting and relevant control measures for the diseases should be handled accordingly.

(2) According to the announcement of the Department of Health of the Executive Yuan, Shu-So-Ji No. 0980000829 on June 19, 2009, amendment was made to exclude influenza A (H1N1) from Category 1 notifiable communicable diseases. Any influenza A (H1N1) cases with severe complications should be reported in accordance with regulations applicable to Category 4 notifiable communicable diseases, and subject to that category's corresponding prevention and control measures.

(3) Leprosy were renamed as Hansen's Disease and HIV Infection were belong to category 3 of communicable disease Since Nov.1, 2008, announced under Sue-So-Ji No. 0970001187 on October 24, 2008.

(4) Botulism poisoning, Rabies：On detection of suspected cases, please contact health agencies immediately for anti-toxin, vaccines or immunoglobulin for treatment.

(5) On detection of acute intestinal tract communicable diseases such as suspected Cholera, Typhoid Fever, dysentery, Pertussis, Meningococcal Meningitis specimens shall be collected for laboratory testing before medication. For specimen collection for cases of other communicable diseases, please refer to the "Manual of Standard Operational Procedures for Specimen Collection for Disease Control" of the Center for Disease Control, or directly contact the local health bureau (station).

(6) Acute Hepatitis Unspecified- the serological test has been tagged items are negative. The reporting of Acute Hepatitis D,E and Unspecified shall send the specimen to CDC lab. For specimen collection of the rest acute hepatitis, please refer to the "Manual of Standard Operation Procedures for specimen collection of Disease control.

(7) HIV infection：Cases must be confirmed positive by the Western Blot assay. When reporting, hospitals shall attach laboratory testing report of positive by the Western Blot or indicate agent of confirmation testing.
AIDS：Cases must be confirmed positive by the Western Blot assay; cases are considered infected only when they show symptoms of opportunistic infections such as candidiasis or pneumocystis carinii pneumonia (PCP) ;an additional "report of AIDS case" should be filled out.
HIV/AIDS, Gonorrhea and Syphilis：the married state of the case must be filled out.

(8) This report may be mailed or faxed to the local health agency or internet communications. When necessary, report can be made directly by telephone to the local health agency (report will be filled out by person-in-charge.)

(9) Website：https://ida4.cdc.gov.tw/hospital

For further information, please contact：
_____Health Bureau, Disease Control Section
Hot Line：_____

appendix 4

2010 calendar for re-defined months

	January								February								March						
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat
week 53	27	28	29	30	31	1	2	week 5	31	1	2	3	4	5	6	week 9	28	1	2	3	4	5	6
week 1	3	4	5	6	7	8	9	week 6	7	8	9	10	11	12	13	week 10	7	8	9	10	11	12	13
week 2	10	11	12	13	14	15	16	week 7	14	15	16	17	18	19	20	week 11	14	15	16	17	18	19	20
week 3	17	18	19	20	21	22	23	week 8	21	22	23	24	25	26	27	week 12	21	22	23	24	25	26	27
week 4	24	25	26	27	28	29	30		~~28~~								~~28~~	~~29~~	~~30~~	~~31~~			
	~~31~~																						

	April								May								June						
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat
week 13	28	29	30	31	1	2	3								~~1~~	week 22	30	31	1	2	3	4	5
week 14	4	5	6	7	8	9	10	week 18	2	3	4	5	6	7	8	week 23	6	7	8	9	10	11	12
week 15	11	12	13	14	15	16	17	week 19	9	10	11	12	13	14	15	week 24	13	14	15	16	17	18	19
week 16	18	19	20	21	22	23	24	week 20	16	17	18	19	20	21	22	week 25	20	21	22	23	24	25	26
week 17	25	26	27	28	29	30	1	week 21	23	24	25	26	27	28	29		~~27~~	~~28~~	~~29~~	~~30~~			
									~~30~~	~~31~~													

	July								August								September						
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat
week 26	27	28	29	30	1	2	3	week 31	1	2	3	4	5	6	7	week 35	29	30	31	1	2	3	4
week 27	4	5	6	7	8	9	10	week 32	8	9	10	11	12	13	14	week 36	5	6	7	8	9	10	11
week 28	11	12	13	14	15	16	17	week 33	15	16	17	18	19	20	21	week 37	12	13	14	15	16	17	18
week 29	18	19	20	21	22	23	24	week 34	22	23	24	25	26	27	28	week 38	19	20	21	22	23	24	25
week 30	25	26	27	28	29	30	31		~~29~~	~~30~~	~~31~~					week 39	26	27	28	29	30	1	2

	October								November								December						
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat
						~~1~~	~~2~~	week 44	31	1	2	3	4	5	6	week 48	28	29	30	1	2	3	4
week 40	3	4	5	6	7	8	9	week 45	7	8	9	10	11	12	13	week 49	5	6	7	8	9	10	11
week 41	10	11	12	13	14	15	16	week 46	14	15	16	17	18	19	20	week 50	12	13	14	15	16	17	18
week 42	17	18	19	20	21	22	23	week 47	21	22	23	24	25	26	27	week 51	19	20	21	22	23	24	25
week 43	24	25	26	27	28	29	30		~~28~~	~~29~~	~~30~~					week 52	26	27	28	29	30	31	1
	~~31~~																						

Acknowledgement

We would like to thank all medical practitioners, laboratory personnel, nurses, public health professionals, as well as partners from public and private healthcare institutions and other government agencies, who contributed to the data and information published in this report. We acknowledge their invaluable contributions towards our national efforts in communicable diseases surveillance, prevention and control, and look forward to their continued support and cooperation in our work.

List of information providers

Centers for Disease Control, Department of Health, Executive Yuan
Lo-Sheng Sanatorium, Department of Health, Executive Yuan
Center for Disease Control of Taipei City Health Department
Taipei County Government Health Bureau*
Keelung City Health Bureau
Yilan County Government Health Bureau
Kinmen County Health Bureau
Lienchiang County Health Bureau
Taoyuan County Government Health Bureau
Hsinchu City Health Bureau
Hsinchu County Government Health Bureau
Miaoli County Government Health Bureau
Taichung City Health Bureau*
Taichung County Health Bureau*
Changhua County Health Bureau
Nantou County Government Health Bureau
Yunlin County Health Bureau
Chiayi City Health Bureau
Chiayi County Health Bureau
Tainan City Health Bureau*
Tainan County Health Bureau*
Kaohsiung City Government Health Bureau*
Kaohsiung County Government Health Bureau*
Pingtung County Health Bureau
Penghu County Government Health Bureau
Hualien County Health Bureau
Taitung County Health Bureau

Note: After the mergers of some cities and counties on December 25, 2010, the previous Taipei County Government Health Bureau is now named Public Health Department, New Taipei City Government; the previous Taichung City Health Bureau and Taichung County Health Bureau are combined and reorganized into Taichung City Public Health Bureau; the previous Tainan City Health Bureau and Tainan County Health Bureau are combined and reorganized into Tainan City Health Bureau; and the previous Kaohsiung City Government Health Bureau and Kaohsiung County Government Health Bureau are combined and reorganized into Department of Health, Kaohsiung City Government.

Data providers in Taiwan CDC

The Second Division: Ji-Jia Huang, Shu-Fong Chen, Chia-Ying Wang, Shih-Chun Huang, Chin-Tzu Chen, Yi-Hsin Pan

The Third Division: Yen-Fang Huang, An-Chi Lai, Shin-Wen Yen, Kwei-Feng Wang, Bao-Yun Lu

The Fifth Division: Shu-Hui Tseng, Li-Jung Chien, Chiu-Hsia Su, Wei-Hui Chou, Po-Wen Wang, Yen-Ting Chan

Epidemic Intelligence Center: Shiang-Lin Yang, Hsiu-Yun Lo, Wan-Jen Wu, Fang-Tzy Wu, Zhi-Pei Sun, Yi-Chen Tsai, Wan-Ting Huang, Pei-Jung Chen, Hui-Hsun Huang, Fa-Wei Tang

Research and Diagnosis Center: Li-ching Hsu, Li-Wen Kuo, Yuan-pin Huang, Chia-Hsuan Chen, Hwa-Jen Teng, Shu-Wan Jian, Yu-Jen Hsu

The Seventh Branch: Jui-Wei Hsieh, Chun-Ho Chen, Li-Jue Wu, Yu-Ju Chu, Wei-Hsu Leng

Statistics of Communicable Diseases and Surveillance Report, Republic of China

Formerly title: Statistics of Communicable Diseases and Surveillance Report in Taiwan Area
Revised date: November, 2006
Frequency: Annual
Editor: Centers for Disease Control, Department of Health, R. O. C. (Taiwan)
Chief Editor: Feng-Yee Chang
Associate Editors: Wen-Yi Shi, Jih-Haw Chou, Ying-Hwei Chen, Jen-Hsiang Chuang, Shih-Yan Yang, Ding-Ping Liu, Chin-Hui Yang, Chang-Hsun Chen, Jer-Jea Yan, Ho-Sheng Wu, Zheng-Lou Jiang, Min-Cheng Lin
Executive Editor: Wan-Jen Wu
Publisher: Centers for Disease Control, Department of Health, R. O. C. (Taiwan)
Address: No.6, Linshen S. Road, Taipei, Taiwan 100
Telephone No.: +886-2-23959825
Website: http:// www.cdc.gov.tw
Printer:Navigator Disabled persons Occupation Development Association
Address: 1F., No.44, Aly. 12, Ln. 261, Sec. 2, Xiyuan Rd., Wanhua Dist., Taipei City 108, Taiwan (R.O.C.)
Telephone No.:+866-2-23093138
Date of Publication: November, 2011
Date of begin publication: September, 1994
Price: NT. $ 300
Available at the following bookstores:
1. Government Publish Store
   Add.: 1F., No. 209, Songjiang Rd., Zhongshan District, Taipei City 104, Taiwan (R.O.C.)
   Tel.: +886-2-2518-0207
   Website: http://www.govbooks.com.tw
2. Wu Nan Bookstore
   Add.: 6 Jhongshan Rd., Taichung City, Taiwan
   Tel.: +886-4-2226-0330
   Website: http://www.wunanbooks.com.tw/
3. eslitebooks.com
   Website: http://www.eslitebooks.com/xinyi/
4. Books.com Co.
   Website: http://www.books.com.tw/

GPN: 2009503743
ISSN: 1992-4526

Copyrighted by Centers for Disease Control, Department of Health, R.O.C. (Taiwan)
No part of this publication may be reproduced, stored in any retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission from the copyright owner.

Disease prevention should be regarded as a battle
Unity, professionalism and action are the keys to success
Website: http://www.cdc.gov.tw
Health Consultation Hotline:1922

ISSN 1992-4526
9 771992 452009
GPN: 2009503743
PRICE:NT$ 300