



Statistics

of

Communicable Diseases and Surveillance Report

2011

Annual
October 2012

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

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Foreword

Welcome to the 2011 Statistics of Communicable Diseases and Surveillance Report by the Taiwan Centers for Disease Control (Taiwan CDC). Since the establishment of Taiwan CDC, we continuously aim to construct a well-functioned and comprehensive communicable disease control system through employing mobilization, quick response, effective strategies, and international cooperation. Ensuring the source of real-time disease surveillance information is consistently comprehensive, stable, and well-organized lays the foundation of an effective communicable disease control system. Further, periodic analysis and interpretation of disease surveillance data can assist policymakers in constructing appropriate responses and decisions accordingly.

Each year, acute communicable diseases, including influenza, dengue fever, and enterovirus infections, incur substantial disease burden in Taiwan. In terms of surveillance for influenza and enterovirus infection, in addition to the existing surveillance systems established by Taiwan CDC, computerized data from emergency departments and the Bureau of National Health Insurance database were used to monitor disease trends. In addition, Taiwan CDC also cooperates with contracted laboratories to identify virus types and subtypes, and viral evolution. Take the surveillance for enterovirus as an example, EV 71 remained epidemic in 2011 and has the potential of causing a more large-scale outbreak in 2012. Therefore, Taiwan CDC gathered experts to convene an advisory conference for formulating response and control measures and strengthened cooperation and communication among different government sectors to effectively control enterovirus infections. In terms of control of dengue fever, before the start of the dengue season in 2011, the central and local governments collaborated to reinforce the implementation

of container reduction strategies and vector breeding site elimination activities in the community, turning past experiences into routine practices as an attempt to effectively prevent dengue fever outbreaks.

As for the prevention of chronic communicable diseases such as tuberculosis and HIV/AIDS, case management and follow-up have been implemented under the cooperation of the central and local health authorities and healthcare facilities. Although the number of new tuberculosis cases has dropped in recent years, the number of HIV/AIDS cases has slightly increased. Hence, putting available budget into efficient use and effectively allocating limited healthcare resources remain challenging issues.

This annual report records all statistics on the epidemiological trends of communicable diseases in Taiwan in 2011. I sincerely hope that 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. Our CDC staffs will continue to act on our agency's core values of "Humanity, Professionalism, Proactivity, Teamwork and Communication" to further improve the existing disease control system that protects the people against potential public health threats.



Feng-Yee Chang, MD, PhD
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Statistics of Communicable Diseases and Surveillance Report

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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, Communicable Disease Control Act.
 - (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 1991. The program was implemented from 1992 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 was implemented since 2002 to 2006. The fourth phase of the program was approved in 2006 and was 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. In addition, an “Acute Communicable Disease Risk Assessment and Intervention Project” was approved in 2010 and is implemented from 2011 through 2015.
 - (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. The ages of the syphilis, gonorrhea, HIV infection, AIDS, Hansen's disease and Creutzfeldt-Jacob disease cases were calculated based on the day of diagnosis. The ages of the TB and MDR-TB (multi-drug resistant tuberculosis) cases were calculated based on the day the case was reported and the day the case was registered with Taiwan CDC respectively.
- (3) By month: The actual disease onset month of the confirmed case. The disease onset months of the syphilis, gonorrhea, HIV infection, AIDS, Hansen's disease and Creutzfeldt-Jacob disease cases were calculated based on the month of diagnosis. The disease onset months of the TB and MDR-TB (multi-drug resistant tuberculosis) cases were calculated based on the month the case was reported and the month the case was registered with Taiwan CDC respectively.
- (4) By year: The actual disease onset year of the confirmed case. The disease onset years of the syphilis, gonorrhea, HIV infection, AIDS, Hansen's disease and Creutzfeldt-Jacob disease cases were calculated based on the year of diagnosis. The disease onset years of the TB and MDR-TB cases were calculated based on the year the case was reported and the year the case was registered with Taiwan CDC respectively.
- (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 "2011 Demographic Fact Book, Republic of China" by the Ministry of the Interior and which is used to

calculate the incidence rate of diseases.

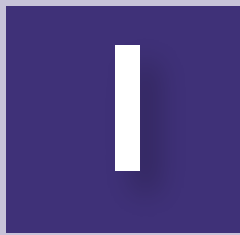
- (10) Beginning in 2002, the historical information will not be amended. Any correction made to such information will be listed in the appendix 1. The analysis baseline in 2011 was based on the data before 2012/5/1.
- (11) The statistics of MDR-TB, Chikungunya Fever, Neonatal Tetanus, Herpesvirus B 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) The following revision was promulgated under Sue-So-Ji No. 0970001187 on October 24, 2008. Leprosy was renamed Hansen's disease and HIV infection was included in the list of Category III Notifiable Communicable Diseases. The revision came into effect beginning November 1, 2008.
- (13) According to Shu-So-Ji No. 0980000531 promulgated on April 27, 2009, titled amendment of the “Communicable Disease Classification”, “Influenza A (H1N1)” was added to the list of Category I Notifiable Communicable Diseases. Later, another amendment of the “Communicable Disease Classification” was made under Shu-So-Ji No. 0980000829 promulgated on June 19, 2009 to remove “Influenza A (H1N1)” from the list of Category I Notifiable Communicable Diseases. Any cases of influenza A (H1N1) with severe complications should be reported in accordance with the 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 was included in the list of Category IV Notifiable Communicable Diseases.
- (15) According to the Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1000100896 dated September 9, 2011, “Severe Complicated Influenza Case” under Category IV Notifiable Communicable Disease was renamed “Complicated Influenza.”

5. Symbols: “-” for no reported cases; “...” for not under surveillance.

6. Figures may not sum up to the total due to rounding.

* 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”.



Summary Tables and Graphs for Confirmed Cases

©Abbreviations and Symbols Used in Table

- No reported cases.
- ... Not under surveillance.

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2011

Unit : Person

Area / Locality	Midyear population	Category I					
		Smallpox	Plague	SARS	Rabies	Anthrax	H5N1 Influenza
Total	23,193,518	-	-	-	-	-	-
Taipei Area							
Taipei City	2,634,870	-	-	-	-	-	-
New Taipei City	3,906,909	-	-	-	-	-	-
Keelung City	382,030	-	-	-	-	-	-
Yilan County	459,774	-	-	-	-	-	-
Kinmen County	100,623	-	-	-	-	-	-
Lienchiang County	10,026	-	-	-	-	-	-
Northern Area							
Taoyuan County	2,007,682	-	-	-	-	-	-
Hsinchu City	417,698	-	-	-	-	-	-
Hsinchu County	515,328	-	-	-	-	-	-
Miaoli County	561,489	-	-	-	-	-	-
Central Area							
Taichung City	2,656,406	-	-	-	-	-	-
Changhua County	1,305,163	-	-	-	-	-	-
Nantou County	524,649	-	-	-	-	-	-
Southern Area							
Yunlin County	715,604	-	-	-	-	-	-
Chiayi City	271,958	-	-	-	-	-	-
Chiayi County	540,595	-	-	-	-	-	-
Tainan City	1,875,377	-	-	-	-	-	-
Kao-Ping Area							
Kaohsiung City	2,773,977	-	-	-	-	-	-
Pingtung County	869,019	-	-	-	-	-	-
Penghu County	97,038	-	-	-	-	-	-
Eastern Area							
Hualien County	337,822	-	-	-	-	-	-
Taitung County	229,481	-	-	-	-	-	-
Others							
		-	-	-	-	-	-

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

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	-	49	1,702	22	5	6	-	45
Taipei Area								
Taipei City	-	5	54	-	-	1	-	2
New Taipei City	-	4	30	-	1	-	-	6
Keelung City	-	1	3	-	-	-	-	-
Yilan County	-	-	2	-	-	-	-	-
Kinmen County	-	1	1	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-	-
Northern Area								
Taoyuan County	-	20	24	-	-	-	-	3
Hsinchu City	-	3	1	-	-	-	-	-
Hsinchu County	-	5	2	-	-	-	-	-
Miaoli County	-	2	4	-	-	1	-	-
Central Area								
Taichung City	-	4	22	1	1	-	-	4
Changhua County	-	1	7	-	-	1	-	2
Nantou County	-	-	4	-	-	-	-	1
Southern Area								
Yunlin County	-	-	2	-	1	-	-	3
Chiayi City	-	-	1	-	-	-	-	1
Chiayi County	-	1	3	-	-	-	-	1
Tainan City	-	1	112	1	1	1	-	8
Kao-Ping Area								
Kaohsiung City	-	1	1,183	19	-	2	-	7
Pingtung County	-	-	149	1	-	-	-	4
Penghu County	-	-	98	-	-	-	-	3
Eastern Area								
Hualien County	-	-	-	-	-	-	-	-
Taitung County	-	-	-	-	1	-	-	-
Others	-	-	-	-	-	-	-	-

Note: ¹The case amount in 2011 contained imported cases, including seven typhoid fever, 157 dengue fever, two dengue hemorrhagic fever / dengue shock syndrome and five paratyphoid fever.

²No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis (AFP) was used for detecting cases of poliomyelitis after implementing the "Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus" in 1992. AFP cases aged 15 years and above had been excluded since 2005.

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

Unit : Person

Area / Locality	Midyear population	Category II						
		Shigellosis ¹	Amoebiasis ¹	Malaria ¹		Measles ¹	Acute ¹ Hepatitis A	Enterohaemo- rrhagic <i>E. coli</i> Infection
				Indigenous	Imported			
Total	23,193,518	203	256	-	17	33	104	-
Taipei Area								
Taipei City	2,634,870	24	28	-	3	4	12	-
New Taipei City	3,906,909	43	42	-	4	3	19	-
Keelung City	382,030	8	4	-	-	-	5	-
Yilan County	459,774	32	5	-	-	-	-	-
Kinmen County	100,623	-	-	-	-	-	-	-
Lienchiang County	10,026	-	-	-	-	17	-	-
Northern Area								
Taoyuan County	2,007,682	21	26	-	3	3	10	-
Hsinchu City	417,698	4	6	-	2	-	2	-
Hsinchu County	515,328	3	2	-	-	-	3	-
Miaoli County	561,489	1	2	-	-	-	5	-
Central Area								
Taichung City	2,656,406	8	20	-	3	3	15	-
Changhua County	1,305,163	8	8	-	-	-	7	-
Nantou County	524,649	2	13	-	-	-	1	-
Southern Area								
Yunlin County	715,604	1	4	-	-	2	-	-
Chiayi City	271,958	-	5	-	-	-	1	-
Chiayi County	540,595	1	15	-	-	-	3	-
Tainan City	1,875,377	8	22	-	2	-	2	-
Kao-Ping Area								
Kaohsiung City	2,773,977	11	31	-	-	-	12	-
Pingtung County	869,019	1	6	-	-	1	2	-
Penghu County	97,038	2	3	-	-	-	-	-
Eastern Area								
Hualien County	337,822	25	10	-	-	-	5	-
Taitung County	229,481	-	4	-	-	-	-	-
Others								
		-	-	-	-	-	-	-

Note: ¹The case amount in 2011 contained imported cases, including 139 shigellosis, 135 amoebiasis, 17 malaria, four measles and 20 acute hepatitis A.

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

Unit : Person

Area / Locality	Category II							
	Hantavirus Syndrome		Cholera ¹	Rubella ¹	MDR-TB ³	Chikungunya ¹ Fever	West Nile Fever	Epidemic Typhus Fever
	Hemorrhagic Fever with Renal Syndrome	Hantavirus Pulmonary Syndrome						
Total	-	-	3	60	154	1	-	-
Taipei Area								
Taipei City	-	-	-	5	13	-	-	-
New Taipei City	-	-	-	9	20	-	-	-
Keelung City	-	-	-	-	2	-	-	-
Yilan County	-	-	-	3	4	-	-	-
Kinmen County	-	-	-	1	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-	-
Northern Area								
Taoyuan County	-	-	-	13	9	-	-	-
Hsinchu City	-	-	-	2	-	-	-	-
Hsinchu County	-	-	-	2	4	-	-	-
Miaoli County	-	-	-	-	1	-	-	-
Central Area								
Taichung City	-	-	1	14	13	-	-	-
Changhua County	-	-	-	1	13	-	-	-
Nantou County	-	-	-	-	7	-	-	-
Southern Area								
Yunlin County	-	-	-	-	7	-	-	-
Chiayi City	-	-	-	-	3	-	-	-
Chiayi County	-	-	-	-	5	-	-	-
Tainan City	-	-	1	4	17	-	-	-
Kao-Ping Area								
Kaohsiung City	-	-	1	5	20	1	-	-
Pingtung County	-	-	-	-	8	-	-	-
Penghu County	-	-	-	-	-	-	-	-
Eastern Area								
Hualien County	-	-	-	-	4	-	-	-
Taitung County	-	-	-	1	4	-	-	-
Others	-	-	-	-	-	-	-	-

Note: ¹The case amount in 2011 contained imported cases, including one cholera, 33 rubella, and one chikungunya fever.

³The caseload of MDR-TB was calculated based on CDC's registration date.

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

Unit : Person

Area / Locality	Midyear population	Category III							
		Pertussis	Tetanus ⁵	Japanese Encephalitis	Tuberculosis ³		Congenital Rubella Syndrome	Acute ¹ Hepatitis B	Acute Hepatitis C
					Smear-positive	Others			
Total	23,193,518	77	10	22	4,559	8,075	-	163	34
Taipei Area									
Taipei City	2,634,870	15	1	-	343	657	-	25	5
New Taipei City	3,906,909	20	1	5	681	1,328	-	37	5
Keelung City	382,030	2	-	-	78	142	-	3	1
Yilan County	459,774	5	-	-	101	170	-	5	-
Kinmen County	100,623	-	-	-	8	10	-	-	-
Lienchiang County	10,026	-	-	-	-	3	-	1	-
Northern Area									
Taoyuan County	2,007,682	14	1	1	302	577	-	14	1
Hsinchu City	417,698	1	-	1	35	94	-	4	1
Hsinchu County	515,328	-	-	1	72	136	-	5	1
Miaoli County	561,489	-	-	1	70	117	-	1	3
Central Area									
Taichung City	2,656,406	1	1	1	381	845	-	11	1
Changhua County	1,305,163	5	-	1	303	477	-	4	-
Nantou County	524,649	-	-	3	166	246	-	5	1
Southern Area									
Yunlin County	715,604	2	-	-	194	304	-	3	1
Chiayi City	271,958	2	-	-	44	82	-	1	1
Chiayi County	540,595	-	2	-	145	226	-	5	1
Tainan City	1,875,377	1	2	1	343	640	-	12	3
Kao-Ping Area									
Kaohsiung City	2,773,977	6	1	2	741	1,208	-	16	3
Pingtung County	869,019	2	-	1	326	521	-	6	3
Penghu County	97,038	-	-	-	10	8	-	-	-
Eastern Area									
Hualien County	337,822	-	-	4	114	163	-	3	1
Taitung County	229,481	1	1	-	102	121	-	2	2
Others		-	-	-	-	-	-	-	-

Note:¹Fourteen cases of acute hepatitis B were imported in 2011.³The caseload of tuberculosis was estimated based on notification date.⁵Calculation for tetanus was based on reported cases only.

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

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- ¹ specified					
Total	-	12	10	1,171	97	9	6,372	1,978
Taipei Area								
Taipei City	-	1	4	221	16	-	900	464
New Taipei City	-	5	2	276	19	1	1,337	549
Keelung City	-	-	-	24	-	-	137	79
Yilan County	-	-	-	42	2	-	169	20
Kinmen County	-	-	-	1	-	-	8	4
Lienchiang County	-	-	-	-	-	-	1	-
Northern Area								
Taoyuan County	-	1	-	67	8	-	700	210
Hsinchu City	-	1	-	21	-	-	95	40
Hsinchu County	-	-	-	33	1	2	95	60
Miaoli County	-	-	-	23	1	-	83	50
Central Area								
Taichung City	-	3	-	80	8	-	678	123
Changhua County	-	1	1	40	6	-	245	26
Nantou County	-	-	-	19	2	1	92	15
Southern Area								
Yunlin County	-	-	-	19	4	-	141	35
Chiayi City	-	-	-	4	-	-	63	18
Chiayi County	-	-	-	6	-	-	105	24
Tainan City	-	-	1	37	10	-	364	90
Kao-Ping Area								
Kaohsiung City	-	-	2	136	8	-	721	93
Pingtung County	-	-	-	48	3	2	278	39
Penghu County	-	-	-	21	1	-	10	2
Eastern Area								
Hualien County	-	-	-	19	5	1	99	23
Taitung County	-	-	-	34	3	2	51	14
Others	-	-	-	-	-	-	-	-

Note: ¹The case amount in 2011 contained imported cases, including six acute hepatitis E, one acute hepatitis unspecified, and six legionellosis.

⁵Calculation for mumps was based on reported cases only.

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

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

Unit : Person

Area / Locality	Midyear population	Category III					Category IV	
		Neonatal Tetanus	Enteroviruses Infection with Severe Complications	HIV ⁷ Infection	AIDS ⁷	Hansen's ^{4,6} Disease	Herpesvirus B Infection	Leptospirosis
Total	23,193,518	-	59	1,967	1,075	5	-	55
Taipei Area								
Taipei City	2,634,870	-	1	335	142	-	-	5
New Taipei City	3,906,909	-	3	482	203	2	-	8
Keelung City	382,030	-	-	33	18	-	-	-
Yilan County	459,774	-	-	17	7	-	-	-
Kinmen County	100,623	-	1	1	1	-	-	1
Lienchiang County	10,026	-	-	-	-	-	-	-
Northern Area								
Taoyuan County	2,007,682	-	4	168	100	-	-	4
Hsinchu City	417,698	-	2	36	18	1	-	-
Hsinchu County	515,328	-	-	34	16	-	-	1
Miaoli County	561,489	-	-	18	11	-	-	-
Central Area								
Taichung City	2,656,406	-	7	223	137	-	-	14
Changhua County	1,305,163	-	7	47	51	-	-	2
Nantou County	524,649	-	1	21	17	-	-	3
Southern Area								
Yunlin County	715,604	-	9	37	48	-	-	-
Chiayi City	271,958	-	3	6	4	-	-	-
Chiayi County	540,595	-	9	18	15	-	-	-
Tainan City	1,875,377	-	7	105	71	-	-	1
Kao-Ping Area								
Kaohsiung City	2,773,977	-	3	298	167	1	-	9
Pingtung County	869,019	-	-	59	30	1	-	3
Penghu County	97,038	-	-	2	1	-	-	-
Eastern Area								
Hualien County	337,822	-	1	16	13	-	-	2
Taitung County	229,481	-	1	11	5	-	-	2
Others								
		-	-	-	-	-	-	-

Note:⁴The confirmed cases of Hansen's disease included one Taiwanese and four Indonesian.⁶The caseload of Hansen's disease was estimated based on diagnosis date.⁷The caseload of HIV infection and AIDS were estimated based on diagnosis date, and the cases of foreign nationality were excluded.

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

Unit : Person

Area / Locality	Category IV						
	Melioidosis ¹	Botulism	Invasive ¹ Pneumococcal Disease	Q Fever ¹	Endemic ¹ Typhus Fever	Lyme Disease	Tularemia ¹
Total	45	6	837	35	26	-	1
Taipei Area							
Taipei City	-	-	60	-	-	-	-
New Taipei City	-	-	166	2	-	-	-
Keelung City	-	-	21	-	-	-	-
Yilan County	-	1	19	-	-	-	-
Kinmen County	-	-	-	2	-	-	-
Lienchiang County	-	-	-	-	-	-	-
Northern Area							
Taoyuan County	1	-	77	-	1	-	-
Hsinchu City	-	-	9	-	-	-	-
Hsinchu County	-	-	25	-	-	-	1
Miaoli County	-	-	21	-	-	-	-
Central Area							
Taichung City	1	-	101	1	4	-	-
Changhua County	1	1	49	8	4	-	-
Nantou County	-	3	16	-	-	-	-
Southern Area							
Yunlin County	-	-	24	-	-	-	-
Chiayi City	-	-	8	1	1	-	-
Chiayi County	-	-	24	1	1	-	-
Tainan City	2	-	73	6	4	-	-
Kao-Ping Area							
Kaohsiung City	37	-	77	9	6	-	-
Pingtung County	2	1	31	4	4	-	-
Penghu County	-	-	-	-	-	-	-
Eastern Area							
Hualien County	-	-	23	-	-	-	-
Taitung County	1	-	13	1	1	-	-
Others	-	-	-	-	-	-	-

Note:¹The case amount in 2011 contained imported cases, including one melioidosis, one invasive pneumococcal disease, two Q fever, one endemic typhus fever, and one tularemia.

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

Unit : Person

Area / Locality	Midyear population	Category IV					
		Scrub ¹ Typhus	Varicella ⁵	Cat- ¹ Scratch Disease	Toxoplasmosis	Complicated ^{1,10} Influenza	Creutzfeldt- ⁶ Jakob Disease
Total	23,193,518	322	9,867	48	5	1,481	-
Taipei Area							
Taipei City	2,634,870	19	2,001	6	-	171	-
New Taipei City	3,906,909	12	2,531	10	-	416	-
Keelung City	382,030	-	137	1	-	14	-
Yilan County	459,774	2	168	-	-	15	-
Kinmen County	100,623	77	21	-	-	3	-
Lienchiang County	10,026	19	8	-	-	1	-
Northern Area							
Taoyuan County	2,007,682	6	734	7	2	142	-
Hsinchu City	417,698	1	265	1	-	20	-
Hsinchu County	515,328	3	303	4	-	27	-
Miaoli County	561,489	3	208	2	1	22	-
Central Area							
Taichung City	2,656,406	13	806	3	-	77	-
Changhua County	1,305,163	8	629	1	-	49	-
Nantou County	524,649	15	109	-	-	13	-
Southern Area							
Yunlin County	715,604	2	91	-	-	48	-
Chiayi City	271,958	1	61	-	-	7	-
Chiayi County	540,595	4	97	-	-	32	-
Tainan City	1,875,377	3	384	2	-	75	-
Kao-Ping Area							
Kaohsiung City	2,773,977	23	727	3	-	188	-
Pingtung County	869,019	6	234	1	-	40	-
Penghu County	97,038	19	116	-	-	12	-
Eastern Area							
Hualien County	337,822	36	133	3	2	70	-
Taitung County	229,481	50	104	4	-	39	-
Others		-	-	-	-	-	-

Note:¹The case amount in 2011 contained imported cases, including two scrub typhus, one cat-scratch disease, and five complicated influenza.

⁵Calculation for varicella was based on reported cases only.

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

¹⁰The "Severe Complicated Influenza Case" was revised to "Complicated Influenza" on September 16, 2011.

Table 1 (Continued) Number of confirmed cases of notifiable diseases — by locality, 2011

Unit : Person

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

**Table 2 Number of confirmed cases and incidence⁸ rate of notifiable diseases
— by age group, 2011**

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	1	0.58	1	0.13	5	0.19	8	0.25	21	0.37
Dengue Fever ¹	1	0.58	10	1.27	116	4.46	152	4.74	428	7.54
Dengue Hemorrhagic Fever / ¹ Dengue Shock Syndrome	-	-	-	-	1	0.04	-	-	4	0.07
Meningococcal Meningitis	1	0.58	-	-	1	0.04	-	-	-	-
Paratyphoid Fever ¹	-	-	-	-	-	-	1	0.03	3	0.05
Poliomyelitis	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis ²	2	1.16	13	1.65	30	1.15	-	-	-	-
Shigellosis ¹	-	-	5	0.63	14	0.54	37	1.15	107	1.88
Amoebiasis ¹	-	-	-	-	-	-	41	1.28	145	2.55
Malaria ¹										
Indigenous	-	-	-	-	-	-	-	-	-	-
Imported	-	-	-	-	-	-	1	0.03	9	0.16
Measles ¹	4	2.32	1	0.13	2	0.08	18	0.56	8	0.14
Acute Hepatitis A ¹	-	-	-	-	6	0.23	14	0.44	40	0.70
Enterohaemorrhagic <i>E. coli</i> Infection	-	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome										
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-	-	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-	-	-
Cholera ¹	-	-	-	-	-	-	-	-	1	0.02

Note:¹The case amount in 2011 contained imported cases, including seven typhoid fever, 157 dengue fever, two dengue hemorrhagic fever /dengue shock syndrome, five paratyphoid fever, 139 shigellosis, 135 amoebiasis, 17 malaria, four measles, 20 acute hepatitis A, and one cholera.

²No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis (AFP) was used for detecting cases of poliomyelitis after implementing the "Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus" in 1992. AFP cases aged 15 years and above had been excluded since 2005.

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

**Table 2 (Continued) Number of confirmed cases and incidence⁸ rate of notifiable diseases
 — by age group, 2011**

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	8	0.10	5	0.20	-	-	49	0.21
Dengue Fever ¹	781	9.48	214	8.53	-	-	1,702	7.34
Dengue Hemorrhagic Fever / ¹ Dengue Shock Syndrome	8	0.10	9	0.36	-	-	22	0.09
Meningococcal Meningitis	1	0.01	2	0.08	-	-	5	0.02
Paratyphoid Fever ¹	1	0.01	1	0.04	-	-	6	0.03
Poliomyelitis	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis ²	-	-	-	-	-	-	45	0.19
Shigellosis ¹	26	0.32	14	0.56	-	-	203	0.88
Amoebiasis ¹	50	0.61	20	0.80	-	-	256	1.10
Malaria ¹								
Indigenous	-	-	-	-	-	-	-	-
Imported	7	0.08	-	-	-	-	17	0.07
Measles ¹	-	-	-	-	-	-	33	0.14
Acute Hepatitis A ¹	32	0.39	12	0.48	-	-	104	0.45
Enterohaemorrhagic <i>E. coli</i> Infection	-	-	-	-	-	-	-	-
Hantavirus Syndrome								
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-
Cholera ¹	-	-	2	0.08	-	-	3	0.01

Note:¹The case amount in 2011 contained imported cases, including seven typhoid fever, 157 dengue fever, two dengue hemorrhagic fever /dengue shock syndrome, five paratyphoid fever, 139 shigellosis, 135 amoebiasis, 17 malaria, four measles, 20 acute hepatitis A, and one cholera.

²No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis (AFP) was used for detecting cases of poliomyelitis after implementing the “Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus” in 1992. AFP cases aged 15 years and above had been excluded since 2005.

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

**Table 2 (Continued) Number of confirmed cases and incidence⁸ rate of notifiable diseases
— by age group, 2011**

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	0.13	-	-	19	0.59	23	0.41
MDR-TB ³	-	-	-	-	-	-	8	0.25	21	0.37
Chikungunya Fever ¹	-	-	-	-	-	-	-	-	-	-
West Nile Fever	-	-	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-
Category III										
Pertussis	35	20.31	1	0.13	21	0.81	3	0.09	12	0.21
Tetanus ⁵	-	-	-	-	-	-	1	0.03	-	-
Japanese Encephalitis	-	-	1	0.13	-	-	-	-	8	0.14
Tuberculosis ³										
Smear-positive	1	0.58	-	-	10	0.38	167	5.21	426	7.50
Others	2	1.16	10	1.27	54	2.07	481	15.01	852	15.01
Congenital Rubella Syndrome	-	-	-	-	-	-	-	-	-	-
Acute Hepatitis										
B ¹	2	1.16	-	-	-	-	17	0.53	61	1.07
C	-	-	-	-	-	-	1	0.03	11	0.19
D	-	-	-	-	-	-	-	-	-	-
E ¹	-	-	-	-	-	-	-	-	1	0.02
Unspecified ¹	-	-	-	-	-	-	-	-	4	0.07
Mumps ⁵	10	5.80	221	28.04	536	20.60	94	2.93	127	2.24
Legionellosis ¹	-	-	-	-	1	0.04	1	0.03	3	0.05
Invasive Haemophilus Influenzae Type b Infection	1	0.58	1	0.13	3	0.12	-	-	1	0.02
Syphilis ⁶	24	13.92	-	-	3	0.12	736	22.96	1,933	34.05
Gonorrhea ⁶	-	-	-	-	6	0.23	549	17.13	1,110	19.55
Neonatal Tetanus	-	-	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	8	4.64	40	5.07	11	0.42	-	-	-	-
HIV Infection ⁷	-	-	-	-	1	0.04	541	16.88	1,037	18.27
AIDS ⁷	-	-	-	-	-	-	101	3.15	574	10.11

Note:¹The case amount in 2011 contained imported cases, including 33 rubella, one chikungunya fever, 14 acute hepatitis B, six acute hepatitis E, one acute hepatitis unspecified, and six legionellosis.

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

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

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

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

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

**Table 2 (Continued) Number of confirmed cases and incidence⁸ rate of notifiable diseases
 — by age group, 2011**

Unit : Person

Disease	40-64 yrs		≥ 65 yrs		Age not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category II								
Rubella ¹	17	0.21	-	-	-	-	60	0.26
MDR-TB ³	81	0.98	44	1.75	-	-	154	0.66
Chikungunya Fever ¹	1	0.01	-	-	-	-	1	<0.01
West Nile Fever	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-
Category III								
Pertussis	5	0.06	-	-	-	-	77	0.33
Tetanus ⁵	4	0.05	5	0.20	-	-	10	0.04
Japanese Encephalitis	11	0.13	2	0.08	-	-	22	0.09
Tuberculosis ³								
Smear-positive	1,666	20.22	2,289	91.27	-	-	4,559	19.66
Others	2,356	28.59	4,320	172.24	-	-	8,075	34.82
Congenital Rubella Syndrome	-	-	-	-	-	-	-	-
Acute Hepatitis								
B ¹	70	0.85	13	0.52	-	-	163	0.70
C	16	0.19	6	0.24	-	-	34	0.15
D	-	-	-	-	-	-	-	-
E ¹	9	0.11	2	0.08	-	-	12	0.05
Unspecified ¹	5	0.06	1	0.04	-	-	10	0.04
Mumps ⁵	156	1.89	27	1.08	-	-	1,171	5.05
Legionellosis ¹	41	0.50	51	2.03	-	-	97	0.42
Invasive Haemophilus Influenzae Type b Infection	1	0.01	2	0.08	-	-	9	0.04
Syphilis ⁶	2,275	27.61	1,401	55.86	-	-	6,372	27.47
Gonorrhea ⁶	296	3.59	17	0.68	-	-	1,978	8.53
Neonatal Tetanus	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	-	-	-	-	-	-	59	0.25
HIV Infection ⁷	367	4.45	21	0.84	-	-	1,967	8.48
AIDS ⁷	377	4.58	23	0.92	-	-	1,075	4.63

Note:¹The case amount in 2011 contained imported cases, including 33 rubella, one chikungunya fever, 14 acute hepatitis B, six acute hepatitis E, one acute hepatitis unspecified, and six legionellosis.

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

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

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

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

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

**Table 2 (Continued) Number of confirmed cases and incidence⁸ rate of notifiable diseases
— by age group, 2011**

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}	-	-	-	-	-	-	-	-	4	0.07
Category IV										
Herpesvirus B Infection	-	-	-	-	-	-	-	-	-	-
Leptospirosis	-	-	-	-	-	-	3	0.09	10	0.18
Melioidosis ¹	-	-	-	-	-	-	-	-	2	0.04
Botulism	-	-	1	0.13	-	-	-	-	1	0.02
Invasive Pneumococcal Disease ¹	15	8.70	190	24.11	47	1.81	9	0.28	50	0.88
Q Fever ¹	-	-	-	-	-	-	1	0.03	9	0.16
Endemic Typhus Fever ¹	-	-	-	-	-	-	1	0.03	7	0.12
Lyme Disease	-	-	-	-	-	-	-	-	-	-
Tularemia ¹	-	-	-	-	-	-	-	-	-	-
Scrub Typhus ¹	-	-	6	0.76	10	0.38	45	1.40	80	1.41
Varicella ⁵	307	178.11	705	89.45	4,861	186.78	1,734	54.09	1,778	31.32
Cat-Scratch Disease ¹	-	-	1	0.13	8	0.31	4	0.12	18	0.32
Toxoplasmosis	-	-	-	-	-	-	2	0.06	3	0.05
Complicated Influenza ^{1,10}	28	16.24	78	9.90	103	3.96	88	2.75	262	4.62
Creutzfeldt-Jakob Disease ⁶	-	-	-	-	-	-	-	-	-	-
NDM-1 Enterobacteriaceae	-	-	-	-	-	-	-	-	-	-
Category V										
Rift Valley Fever	-	-	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-

Note:¹The case amount in 2011 contained imported cases, including one melioidosis, one invasive pneumococcal disease, two Q fever, one endemic typhus fever, one tularemia, two scrub typhus, one cat-scratch disease, and five complicated influenza.

⁴The confirmed cases of Hansen's disease included one Taiwanese and four Indonesian.

⁵Calculation for varicella was based on reported cases only.

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

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

¹⁰The "Severe Complicated Influenza Case" was revised to "Complicated Influenza" on September 16, 2011.

**Table 2 (Continued) Number of confirmed cases and incidence⁸ rate of notifiable diseases
 — by age group, 2011**

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}	1	0.01	-	-	-	-	5	0.02
Category IV								
Herpesvirus B Infection	-	-	-	-	-	-	-	-
Leptospirosis	34	0.41	8	0.32	-	-	55	0.24
Melioidosis ¹	25	0.30	18	0.72	-	-	45	0.19
Botulism	4	0.05	-	-	-	-	6	0.03
Invasive Pneumococcal Disease ¹	253	3.07	273	10.88	-	-	837	3.61
Q Fever ¹	21	0.25	4	0.16	-	-	35	0.15
Endemic Typhus Fever ¹	12	0.15	6	0.24	-	-	26	0.11
Lyme Disease	-	-	-	-	-	-	-	-
Tularemia ¹	-	-	1	0.04	-	-	1	<0.01
Scrub Typhus ¹	143	1.74	38	1.52	-	-	322	1.39
Varicella ⁵	441	5.35	41	1.63	-	-	9,867	42.54
Cat-Scratch Disease ¹	16	0.19	1	0.04	-	-	48	0.21
Toxoplasmosis	-	-	-	-	-	-	5	0.02
Complicated Influenza ^{1,10}	603	7.32	319	12.72	-	-	1,481	6.39
Creutzfeldt-Jakob Disease ⁶	-	-	-	-	-	-	-	-
NDM-1 Enterobacteriaceae	-	-	-	-	-	-	-	-
Category V								
Rift Valley Fever	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-

Note:¹The case amount in 2011 contained imported cases, including one melioidosis, one invasive pneumococcal disease, two Q fever, one endemic typhus fever, one tularemia, two scrub typhus, one cat-scratch disease, and five complicated influenza.

⁴The confirmed cases of Hansen's disease included one Taiwanese and four Indonesian.

⁵Calculation for varicella was based on reported cases only.

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

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

¹⁰The "Severe Complicated Influenza Case" was revised to "Complicated Influenza" on September 16, 2011.

Table 3 Number of confirmed cases of notifiable diseases — by month, 2011

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	4	-	1	5	5	-	2	6	12	6	5	3	49
Dengue Fever ¹	17	18	-	4	6	14	23	159	174	406	605	276	1,702
Dengue Hemorrhagic Fever / ¹ Dengue Shock Syndrome	-	-	-	-	-	-	-	3	2	6	7	4	22
Meningococcal Meningitis	1	-	-	1	-	1	1	-	-	-	1	-	5
Paratyphoid Fever ¹	-	-	1	1	2	1	1	-	-	-	-	-	6
Poliomyelitis	-	-	-	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis ²	4	4	3	4	3	3	1	2	5	2	8	6	45
Shigellosis ¹	14	6	38	15	18	16	25	11	19	18	7	16	203
Amoebiasis ¹	27	11	42	15	13	13	23	17	24	22	26	23	256
Malaria ¹													
Indigenous	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported	4	-	2	1	1	-	-	3	2	2	2	-	17
Measles ¹	1	2	10	11	4	5	-	-	-	-	-	-	33
Acute Hepatitis A ¹	7	9	16	7	11	17	8	3	6	6	10	4	104
Enterohaemorrhagic <i>E. coli</i> Infection	-	-	-	-	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome													
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera ¹	-	-	1	-	-	-	-	1	-	-	1	-	3

Note:¹The case amount in 2011 contained imported cases, including seven typhoid fever, 157 dengue fever, two dengue hemorrhagic fever /dengue shock syndrome, five paratyphoid fever, 139 shigellosis, 135 amoebiasis, 17 malaria, four measles, 20 acute hepatitis A, and one cholera.

²No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis (AFP) was used for detecting cases of poliomyelitis after implementing the "Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus" in 1992. AFP cases aged 15 years and above had been excluded since 2005.

Table 3 (Continued) Number of confirmed cases of notifiable diseases — by month, 2011

Unit : Person

Disease	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Category II													
Rubella ¹	1	6	18	11	9	7	4	1	-	2	-	1	60
MDR-TB ³	9	17	15	17	6	19	9	15	14	13	12	8	154
Chikungunya Fever ¹	-	-	-	-	-	-	-	1	-	-	-	-	1
West Nile Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Category III													
Pertussis	4	6	7	4	7	5	1	13	20	2	5	3	77
Tetanus ⁵	-	-	-	1	2	1	-	2	1	2	1	-	10
Japanese Encephalitis	-	-	-	-	-	3	13	4	2	-	-	-	22
Tuberculosis ³													
Smear-positive	318	299	430	371	427	392	395	411	424	338	359	395	4,559
Others	639	495	768	682	788	711	671	710	704	629	643	635	8,075
Congenital Rubella Syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-
Acute Hepatitis													
B ¹	5	13	16	18	13	10	15	19	14	14	16	10	163
C	2	1	1	1	2	1	2	4	5	9	3	3	34
D	-	-	-	-	-	-	-	-	-	-	-	-	-
E ¹	2	-	1	1	2	-	-	-	1	2	3	-	12
Unspecified ¹	1	1	1	1	1	1	-	2	1	1	-	-	10
Mumps ⁵	68	74	106	109	137	129	92	116	97	107	84	52	1,171
Legionellosis ¹	8	8	7	12	9	10	5	7	9	5	10	7	97
Invasive Haemophilus Influenzae Type b Infection	-	2	-	-	-	1	1	-	-	2	1	2	9
Syphilis ⁶	450	383	600	472	521	614	600	595	574	525	545	493	6,372
Gonorrhea ⁶	185	143	174	136	149	171	170	196	140	172	175	167	1,978
Neonatal Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	-	-	-	-	-	-	3	5	7	6	22	16	59
HIV Infection ⁷	129	107	158	186	177	175	171	202	192	150	157	163	1,967
AIDS ⁷	73	62	89	95	106	104	105	90	81	90	92	88	1,075

Note:¹The case amount in 2011 contained imported cases, including 33 rubella, one chikungunya fever, 14 acute hepatitis B, six acute hepatitis E, one acute hepatitis unspecified, and six legionellosis.

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

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

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

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

Table 3 (Continued) Number of confirmed cases of notifiable diseases — by month, 2011

Unit : Person

Disease	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Category III													
Hansen's Disease ^{4,6}	1	-	-	2	-	1	-	1	-	-	-	-	5
Category IV													
Herpesvirus B Infection	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis	2	1	1	2	3	1	9	7	12	6	5	6	55
Melioidosis ¹	1	1	1	3	-	3	3	3	22	5	3	-	45
Botulism	1	1	-	-	-	1	3	-	-	-	-	-	6
Invasive Pneumococcal Disease ¹	110	105	87	92	80	32	42	47	45	62	50	85	837
Q Fever ¹	-	2	3	11	3	2	7	1	3	2	1	-	35
Endemic Typhus Fever ¹	3	2	1	2	4	7	-	1	3	1	2	-	26
Lyme Disease	-	-	-	-	-	-	-	-	-	-	-	-	-
Tularemia ¹	-	-	-	-	-	1	-	-	-	-	-	-	1
Scrub Typhus ¹	27	1	2	8	18	64	63	47	19	27	15	31	322
Varicella ⁵	1,014	962	907	963	957	881	687	651	627	719	724	775	9,867
Cat-Scratch Disease ¹	-	1	-	1	1	2	8	9	6	6	7	7	48
Toxoplasmosis	-	-	-	2	1	-	-	-	1	-	-	1	5
Complicated Influenza ^{1,10}	610	417	43	13	10	7	14	22	9	41	56	239	1,481
Creutzfeldt-Jakob Disease ⁶	-	-	-	-	-	-	-	-	-	-	-	-	-
NDM-1 Enterobacteriaceae	-	-	-	-	-	-	-	-	-	-	-	-	-
Category V													
Rift Valley Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:¹The case amount in 2011 contained imported cases, including one melioidosis, one invasive pneumococcal disease, two Q fever, one endemic typhus fever, one tularemia, two scrub typhus, one cat-scratch disease, and five complicated influenza.

⁴The confirmed cases of Hansen's disease included one Taiwanese and four Indonesian.

⁵Calculation for varicella was based on reported cases only.

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

¹⁰The "Severe Complicated Influenza Case" was revised to "Complicated Influenza" on September 16, 2011.

Table 4 Number of confirmed cases and incidence⁸ rate of notifiable diseases — by sex, 2011

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	22	0.19	27	0.23	-	-	49	0.21
Dengue Fever ¹	846	7.32	856	7.35	-	-	1,702	7.34
Dengue Hemorrhagic Fever/ ¹ Dengue Shock Syndrome	12	0.10	10	0.09	-	-	22	0.09
Meningococcal Meningitis	2	0.02	3	0.03	-	-	5	0.02
Paratyphoid Fever ¹	6	0.05	-	-	-	-	6	0.03
Poliomyelitis	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis ²	15	0.13	30	0.26	-	-	45	0.19
Shigellosis ¹	111	0.96	92	0.79	-	-	203	0.88
Amoebiasis ¹	104	0.90	152	1.31	-	-	256	1.10
Malaria ¹								
Indigenous	-	-	-	-	-	-	-	-
Imported	-	-	17	0.15	-	-	17	0.07
Measles ¹	9	0.08	24	0.21	-	-	33	0.14
Acute Hepatitis A ¹	35	0.30	69	0.59	-	-	104	0.45
Enterohaemorrhagic <i>E. coli</i> Infection	-	-	-	-	-	-	-	-
Hantavirus Syndrome								
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-
Cholera ¹	2	0.02	1	0.01	-	-	3	0.01

Note:¹The case amount in 2011 contained imported cases, including seven typhoid fever, 157 dengue fever, two dengue hemorrhagic fever /dengue shock syndrome, five paratyphoid fever, 139 shigellosis, 135 amoebiasis, 17 malaria, four measles, 20 acute hepatitis A, and one cholera.

²No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis (AFP) was used for detecting cases of poliomyelitis after implementing the "Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus" in 1992. AFP cases aged 15 years and above had been excluded since 2005.

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

**Table 4 (Continued) Number of confirmed cases and incidence⁸ rate of notifiable diseases
— by sex, 2011**

Unit : Person

Disease	Female		Male		Sex not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category II								
Rubella ¹	27	0.23	33	0.28	-	-	60	0.26
MDR-TB ³	43	0.37	111	0.95	-	-	154	0.66
Chikungunya Fever ¹	-	-	1	0.01	-	-	1	<0.01
West Nile Fever	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-
Category III								
Pertussis	37	0.32	40	0.34	-	-	77	0.33
Tetanus ⁵	7	0.06	3	0.03	-	-	10	0.04
Japanese Encephalitis	8	0.07	14	0.12	-	-	22	0.09
Tuberculosis ³								
Smear-positive	1,189	10.29	3,370	28.95	-	-	4,559	19.66
Others	2,664	23.06	5,411	46.48	-	-	8,075	34.82
Congenital Rubella Syndrome	-	-	-	-	-	-	-	-
Acute Hepatitis								
B ¹	64	0.55	99	0.85	-	-	163	0.70
C	15	0.13	19	0.16	-	-	34	0.15
D	-	-	-	-	-	-	-	-
E ¹	-	-	12	0.10	-	-	12	0.05
Unspecified ¹	5	0.04	5	0.04	-	-	10	0.04
Mumps ⁵	480	4.15	691	5.94	-	-	1,171	5.05
Legionellosis ¹	20	0.17	77	0.66	-	-	97	0.42
Invasive Haemophilus Influenzae Type b Infection	4	0.03	5	0.04	-	-	9	0.04
Syphilis ⁶	1,744	15.10	4,628	39.76	-	-	6,372	27.47
Gonorrhea ⁶	144	1.25	1,834	15.76	-	-	1,978	8.53
Neonatal Tetanus	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	22	0.19	37	0.32	-	-	59	0.25
HIV Infection ⁷	65	0.56	1,902	16.34	-	-	1,967	8.48
AIDS ⁷	67	0.58	1,008	8.66	-	-	1,075	4.63

Note:¹The case amount in 2011 contained imported cases, including 33 rubella, one chikungunya fever, 14 acute hepatitis B, six acute hepatitis E, one acute hepatitis unspecified, and six legionellosis.

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

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

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

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

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

**Table 4 (Continued) Number of confirmed cases and incidence⁸ rate of notifiable diseases
 — by sex, 2011**

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	12	0.10	43	0.37	-	-	55	0.24
Melioidosis ¹	11	0.10	34	0.29	-	-	45	0.19
Botulism	2	0.02	4	0.03	-	-	6	0.03
Invasive Pneumococcal Disease ¹	296	2.56	541	4.65	-	-	837	3.61
Q Fever ¹	5	0.04	30	0.26	-	-	35	0.15
Endemic Typhus Fever ¹	6	0.05	20	0.17	-	-	26	0.11
Lyme Disease	-	-	-	-	-	-	-	-
Tularemia ¹	-	-	1	0.01	-	-	1	<0.01
Scrub Typhus ¹	122	1.06	200	1.72	-	-	322	1.39
Varicella ⁵	4,458	38.59	5,409	46.47	-	-	9,867	42.54
Cat-Scratch Disease ¹	23	0.20	25	0.21	-	-	48	0.21
Toxoplasmosis	3	0.03	2	0.02	-	-	5	0.02
Complicated Influenza ^{1,10}	674	5.83	807	6.93	-	-	1,481	6.39
Creutzfeldt-Jakob Disease ⁶	-	-	-	-	-	-	-	-
NDM-1 Enterobacteriaceae	-	-	-	-	-	-	-	-
Category V								
Rift Valley Fever	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-

Note:¹The case amount in 2011 contained imported cases, including one melioidosis, one invasive pneumococcal disease, two Q fever, one endemic typhus fever, one tularemia, two scrub typhus, one cat-scratch disease, and five complicated influenza.

⁴The confirmed cases of Hansen's disease included one Taiwanese and four Indonesian.

⁵Calculation for varicella was based on reported cases only.

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

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

¹⁰The "Severe Complicated Influenza Case" was revised to "Complicated Influenza" on September 16, 2011.

Table 5 Number of confirmed cases of notifiable diseases — by year, 2002-2011

Unit : Person

Disease	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Category I										
Smallpox	...	...	...	...	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-
SARS	...	347	-	-	-	-	-	-	-	-
Rabies	1	-	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-	-
H5N1 Influenza	...	...	...	-	-	-	-	-	-	-
Category II										
Diphtheria	-	-	-	-	-	-	-	-	-	-
Typhoid Fever ¹	54	40	38	35	43	34	33	80	33	49
Dengue Fever ¹	5,388	145	427	306	1,074	2,179	714	1,052	1,896	1,702
Dengue Hemorrhagic Fever ¹ Dengue Shock Syndrome	242	2	7	5	19	12	5	11	21	22
Meningococcal Meningitis	46	26	24	20	13	20	19	2	7	5
Paratyphoid Fever ¹	18	15	19	13	10	6	11	6	12	6
Poliomyelitis	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis ²	84	65	56	61	66	51	74	45	49	45
Shigellosis ¹	436	246	156	174	139	246	90	91	172	203
Amoebiasis ¹	289	121	96	120	125	145	227	190	262	256
Malaria ¹										
Indigenous	-	-	-	-	-	-	-	-	-	-
Imported	28	34	18	26	26	13	18	11	21	17
Measles ¹	24	6	-	7	4	10	16	48	12	33
Acute Hepatitis A ¹	212	160	204	257	189	203	236	234	110	104
Enterohaemorrhagic <i>E. coli</i> Infection	-	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome										
Hemorrhagic Fever with Renal Syndrome	-	-	3	-	3	1	1	-	1	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-	-	-
Cholera ¹	2	1	1	2	1	-	1	3	5	3

Note:¹The case amount in 2011 contained imported cases, including seven typhoid fever, 157 dengue fever, two dengue hemorrhagic fever /dengue shock syndrome, five paratyphoid fever, 139 shigellosis, 135 amoebiasis, 17 malaria, four measles, 20 acute hepatitis A, and one cholera.

²No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis (AFP) was used for detecting cases of poliomyelitis after implementing the "Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus" in 1992. AFP cases aged 15 years and above had been excluded since 2005.

Table 5 (Continued) Number of confirmed cases of notifiable diseases — by year, 2002-2011

Disease	Unit : Person									
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Category II										
Rubella ¹	4	2	4	7	6	54	33	23	21	60
MDR-TB ^{3,9}	...	...	...	...	...	19	159	176	156	154
Chikungunya Fever ^{1,9}	...	...	...	...	...	2	9	9	13	1
West Nile Fever	...	...	...	...	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-
Category III										
Pertussis	18	26	21	38	14	41	41	90	61	77
Tetanus ⁵	15	13	16	16	14	10	18	12	12	10
Japanese Encephalitis	19	25	32	35	29	37	17	18	33	22
Tuberculosis ³										
Smear-positive	5,928	5,203	5,784	5,748	5,542	5,734	5,559	5,210	5,027	4,559
Others	10,830	9,839	11,000	10,724	9,836	8,746	8,706	8,126	8,210	8,075
Congenital Rubella Syndrome	-	-	-	-	-	1	1	-	-	-
Acute Hepatitis										
B ¹	417	326*	378	321	245	202	231	152	172	163
C	156	167	195	172	154	153	124	131	41	34
D	9	11	12	4	5	1	4	1	1	-
E ¹	12	10*	18	21	11	12	14	9	7	12
Unspecified ¹	-	-	-	10	9	10	22	18	13	10
Mumps ⁵	664*	676	1,081	1,158	971	1,208	1,145	1,068	1,125	1,171
Legionellosis ¹	72	109	106	38	56	56	69	84	102	97
Invasive Haemophilus Influenzae Type b Infection	41	22	20	12	16	16	12	14	12	9
Syphilis ⁶	4,182	3,947	5,209	5,305	5,808	5,798	6,526	6,668	6,482	6,372
Gonorrhea ⁶	838	1,626	1,978	1,515	1,437	1,442	1,621	2,137	2,265	1,978
Neonatal Tetanus ⁹	...	...	...	...	...	-	-	-	-	-
Enteroviruses Infection with Severe Complications	162	70	50	142	11	12	373	29	16	59
HIV Infection ⁷	773*	857*	1,521*	3,403	2,938	1,935	1,752	1,648	1,796	1,967
AIDS ⁷	177*	225*	257*	506	579	1,061	849	930	1,087	1,075

Note¹The case amount in 2011 contained imported cases, including 33 rubella, one chikungunya fever, 14 acute hepatitis B, six acute hepatitis E, one acute hepatitis unspecified, and six legionellosis.

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

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

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

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

⁹The 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) Number of confirmed cases of notifiable diseases — by year, 2002-2011

Unit : Person

Disease	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Category III										
Hansen's Disease ^{4,6}	7*	2*	5*	9	11	12	8	7	5	5
Category IV										
Herpesvirus B Infection ⁹	...	...	...	...	...	-	-	-	-	-
Leptospirosis ⁹	...	...	...	...	...	10	47	203	77	55
Melioidosis ^{1,9}	...	...	...	...	...	4	45	44	45	45
Botulism ⁹	...	...	...	...	...	4	11	1	11	6
Invasive Pneumococcal Disease ^{1,9}	...	...	...	...	...	169	805	690	737	837
Q Fever ^{1,9}	...	...	...	...	...	17	91	89	89	35
Endemic Typhus Fever ^{1,9}	...	...	...	...	...	6	31	40	42	26
Lyme Disease ⁹	...	...	...	...	...	1	2	-	-	-
Tularemia ^{1,9}	...	...	...	...	...	-	-	-	-	1
Scrub Typhus ¹	237	271	368	462	384	510	492	353	402	322
Varicella ⁵	13,070*	12,270*	13,219	13,600	10,563	11,110	11,877	10,931	9,218	9,867
Cat-Scratch Disease ^{1,9}	...	...	...	...	...	1	28	26	65	48
Toxoplasmosis ⁹	...	...	...	...	...	2	3	7	5	5
Complicated Influenza ^{1,10}	5	16	19	33	25	26	22	1,134	882	1,481
Creutzfeldt-Jakob Disease ^{6,9}	...	...	...	...	...	-	-	3	-	-
NDM-1 Enterobacteriaceae ¹¹	...	...	...	...	...	...	...	...	1	-
Category V										
Rift Valley Fever	...	...	...	...	-	-	-	-	-	-
Marburg Haemorrhagic Fever	...	...	...	...	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-
Ebola Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
Lassa Fever	...	...	...	...	-	-	-	-	-	-

Note:¹The case amount in 2011 contained imported cases, including one melioidosis, one invasive pneumococcal disease, two Q fever, one endemic typhus fever, one tularemia, two scrub typhus, one cat-scratch disease, and five complicated influenza.

⁴The confirmed cases of Hansen's disease included one Taiwanese and four Indonesian.

⁵Calculation for varicella was based on reported cases only.

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

⁹The 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.

¹⁰The "Severe Complicated Influenza Case" was revised to "Complicated Influenza" on September 16, 2011.

¹¹NDM-1 enterobacteriaceae has belonged to the list of Category IV Notifiable Disease since September 9, 2010.

*The collative case numbers see the appendix 1.

**Table 6 Analysis of time intervals between diagnosis and reporting for notifiable diseases
 — by locality, 2011**

Unit : Day

Locality	2010			2011						
	No.	Average	Median	No.	Average	Median	<=24 hours		>24 hours	
							No.	%	No.	%
Total	7,917	0.3	0	7,489	0.3	0	7,439	99.3	50	0.7
Taipei City	912	0.4	0	1,001	0.4	0	997	99.6	4	0.4
New Taipei City	575	0.2	0	504	0.2	0	501	99.4	3	0.6
Taichung City	497	0.4	0	511	0.3	0	510	99.8	1	0.2
Tainan City	1,205	0.2	0	609	0.3	0	608	99.8	1	0.2
Kaohsiung City	2,918	0.3	0	2,945	0.3	0	2,945	100.0	-	-
Yilan County	52	0.2	0	67	0.7	0	63	94.0	4	6.0
Taoyuan County	521	0.4	0	541	0.3	0	509	94.1	32	5.9
Hsinchu County	17	0.2	0	11	0.1	0	11	100.0	-	-
Miaoli County	67	0.2	0	35	0.3	0	35	100.0	-	-
Changhua County	243	0.1	0	221	0.3	0	221	100.0	-	-
Nantou County	31	0.1	0	30	0.1	0	29	96.7	1	3.3
Yunlin County	58	0.1	0	62	0.1	0	61	98.4	1	1.6
Chiayi County	32	0.0	0	48	0.1	0	48	100.0	-	-
Pingtung County	253	0.3	0	331	0.2	0	331	100.0	-	-
Taitung County	56	0.3	0	50	0.4	0	49	98.0	1	2.0
Hualien County	278	0.2	0	183	0.3	0	181	98.9	2	1.1
Penghu County	20	0.3	0	159	0.2	0	159	100.0	-	-
Keelung City	39	0.1	0	35	0.0	0	35	100.0	-	-
Hsinchu City	85	0.1	0	70	0.2	0	70	100.0	-	-
Chiayi City	48	0.1	0	43	0.1	0	43	100.0	-	-
Kinmen County	10	0.7	0	12	0.3	0	12	100.0	-	-
Lienchiang County	-	-	-	21	0.4	0	21	100.0	-	-

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

**Table 7 Analysis of time intervals between reporting and reports received for
notifiable diseases — by locality, 2011**

Unit : Day

Locality	2010			2011						
	No.	Average	Median	No.	Average	Median	<=24 hours		>24 hours	
							No.	%	No.	%
Total	7,917	0.0	0	7,489	0.0	0	7,489	100.0	-	-
Taipei City	912	0.0	0	1,001	0.0	0	1,001	100.0	-	-
New Taipei City	575	0.0	0	504	0.0	0	504	100.0	-	-
Taichung City	497	0.0	0	511	0.0	0	511	100.0	-	-
Tainan City	1,205	0.0	0	609	0.0	0	609	100.0	-	-
Kaohsiung City	2,918	0.0	0	2,945	0.0	0	2,945	100.0	-	-
Yilan County	52	0.0	0	67	0.0	0	67	100.0	-	-
Taoyuan County	521	0.0	0	541	0.0	0	541	100.0	-	-
Hsinchu County	17	0.0	0	11	0.0	0	11	100.0	-	-
Miaoli County	67	0.0	0	35	0.0	0	35	100.0	-	-
Changhua County	243	0.0	0	221	0.0	0	221	100.0	-	-
Nantou County	31	0.0	0	30	0.0	0	30	100.0	-	-
Yunlin County	58	0.0	0	62	0.0	0	62	100.0	-	-
Chiayi County	32	0.0	0	48	0.0	0	48	100.0	-	-
Pingtung County	253	0.0	0	331	0.0	0	331	100.0	-	-
Taitung County	56	0.0	0	50	0.0	0	50	100.0	-	-
Hualien County	278	0.0	0	183	0.0	0	183	100.0	-	-
Penghu County	20	0.0	0	159	0.0	0	159	100.0	-	-
Keelung City	39	0.0	0	35	0.0	0	35	100.0	-	-
Hsinchu City	85	0.0	0	70	0.0	0	70	100.0	-	-
Chiayi City	48	0.0	0	43	0.0	0	43	100.0	-	-
Kinmen County	10	0.4	0	12	0.1	0	12	100.0	-	-
Lienchiang County	-	-	-	21	0.0	0	21	100.0	-	-

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

Table 8 Analysis of time intervals between reports received from local health bureau to Taiwan CDC for notifiable diseases — by locality, 2011

Unit : Day

Locality	2010			2011						
	No.	Average	Median	No.	Average	Median	<=24 hours		>24 hours	
							No.	%	No.	%
Total	7,917	0.0	0	7,489	0.0	0	7,488	>99.9	1	<0.1
Taipei City	912	0.0	0	1,001	0.0	0	1,001	100.0	-	-
New Taipei City	575	0.0	0	504	0.0	0	503	99.8	1	0.2
Taichung City	497	0.0	0	511	0.0	0	511	100.0	-	-
Tainan City	1,205	0.0	0	609	0.0	0	609	100.0	-	-
Kaohsiung City	2,918	0.0	0	2,945	0.0	0	2,945	100.0	-	-
Yilan County	52	0.0	0	67	0.0	0	67	100.0	-	-
Taoyuan County	521	0.0	0	541	0.0	0	541	100.0	-	-
Hsinchu County	17	0.0	0	11	0.0	0	11	100.0	-	-
Miaoli County	67	0.0	0	35	0.0	0	35	100.0	-	-
Changhua County	243	0.0	0	221	0.0	0	221	100.0	-	-
Nantou County	31	0.0	0	30	0.0	0	30	100.0	-	-
Yunlin County	58	0.0	0	62	0.0	0	62	100.0	-	-
Chiayi County	32	0.0	0	48	0.0	0	48	100.0	-	-
Pingtung County	253	0.0	0	331	0.0	0	331	100.0	-	-
Taitung County	56	0.0	0	50	0.0	0	50	100.0	-	-
Hualien County	278	0.0	0	183	0.0	0	183	100.0	-	-
Penghu County	20	0.0	0	159	0.0	0	159	100.0	-	-
Keelung City	39	0.0	0	35	0.0	0	35	100.0	-	-
Hsinchu City	85	0.0	0	70	0.0	0	70	100.0	-	-
Chiayi City	48	0.0	0	43	0.0	0	43	100.0	-	-
Kinmen County	10	0.0	0	12	0.0	0	12	100.0	-	-
Lienchiang County	-	-	-	21	0.0	0	21	100.0	-	-

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

Table 9 Cases of Acute Flaccid Paralysis, Neonatal Tetanus, Congenital Rubella Syndrome, and Measles Eradication Program — by Locality, 2011

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	221	524	477	91.0	138	43	54	45	83.3	45	-	-	-	-	-
Taipei City	60	124	122	98.4	39	6	7	6	85.7	7	-	-	-	-	-
New Taipei City	5	61	60	98.4	3	-	1	1	100.0	1	-	-	-	-	-
Taichung City	11	67	63	94.0	19	3	9	9	100.0	6	-	-	-	-	-
Tainan City	29	33	33	100.0	11	9	10	10	100.0	8	-	-	-	-	-
Kaohsiung City	56	53	31	58.5	15	13	10	5	50.0	10	-	-	-	-	-
Yilan County	1	8	8	100.0	2	-	-	-	-	-	-	-	-	-	-
Taoyuan County	17	75	75	100.0	20	2	5	5	100.0	5	-	-	-	-	-
Hsinchu County	2	2	2	100.0	1	-	-	-	-	-	-	-	-	-	-
Miaoli County	3	3	3	100.0	-	-	-	-	-	-	-	-	-	-	-
Changhua County	13	13	13	100.0	2	2	2	2	100.0	2	-	-	-	-	-
Nantou County	-	2	2	100.0	-	-	-	-	-	-	-	-	-	-	-
Yunlin County	3	4	1	25.0	2	1	1	-	0.0	1	-	-	-	-	-
Chiayi County	3	4	3	75.0	-	-	-	-	-	-	-	-	-	-	-
Pingtung County	9	9	3	33.3	4	3	3	1	33.3	3	-	-	-	-	-
Taitung County	-	7	-	0.0	-	-	-	-	-	-	-	-	-	-	-
Hualien County	-	6	5	83.3	-	-	1	1	100.0	-	-	-	-	-	-
Penghu County	4	5	5	100.0	-	3	3	3	100.0	-	-	-	-	-	-
Keelung City	-	3	3	100.0	-	-	-	-	-	-	-	-	-	-	-
Hsinchu City	-	17	17	100.0	2	-	-	-	-	-	-	-	-	-	-
Chiayi City	1	5	5	100.0	2	1	2	2	100.0	2	-	-	-	-	-
Kinmen County	-	2	2	100.0	-	-	-	-	-	-	-	-	-	-	-
Lienchiang County	4	21	21	100.0	16	-	-	-	-	-	-	-	-	-	-

- 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 aged 15 years and above had been excluded since 2005.

Table 9 (Continued) Cases of Acute Flaccid Paralysis, Neonatal Tetanus, Congenital Rubella Syndrome, and Measles Eradication Program — by Locality, 2011

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	3	2	2	100.0	-	109	280	258	92.1	33	66	188	172	91.5	60
Taipei City	1	-	-	-	-	36	62	62	100.0	6	17	55	54	98.2	26
New Taipei City	-	1	1	100.0	-	5	46	46	100.0	2	-	13	12	92.3	-
Taichung City	-	-	-	-	-	4	28	26	92.9	3	4	30	28	93.3	10
Tainan City	2	1	1	100.0	-	8	11	11	100.0	-	10	11	11	100.0	3
Kaohsiung City	-	-	-	-	-	19	18	7	38.9	-	24	25	19	76.0	5
Yilan County	-	-	-	-	-	-	5	5	100.0	-	1	3	3	100.0	2
Taoyuan County	-	-	-	-	-	12	38	38	100.0	4	3	32	32	100.0	11
Hsinchu County	-	-	-	-	-	1	1	1	100.0	-	1	1	1	100.0	1
Miaoli County	-	-	-	-	-	3	2	2	100.0	-	-	1	1	100.0	-
Changhua County	-	-	-	-	-	8	9	9	100.0	-	3	2	2	100.0	-
Nantou County	-	-	-	-	-	-	1	1	100.0	-	-	1	1	100.0	-
Yunlin County	-	-	-	-	-	2	3	1	33.3	1	-	-	-	-	-
Chiayi County	-	-	-	-	-	3	4	3	75.0	-	-	-	-	-	-
Pingtung County	-	-	-	-	-	3	3	1	33.3	1	3	3	1	33.3	-
Taitung County	-	-	-	-	-	-	3	-	0.0	-	-	4	-	0.0	-
Hualien County	-	-	-	-	-	-	5	4	80.0	-	-	-	-	-	-
Penghu County	-	-	-	-	-	1	2	2	100.0	-	-	-	-	-	-
Keelung City	-	-	-	-	-	-	3	3	100.0	-	-	-	-	-	-
Hsinchu City	-	-	-	-	-	-	11	11	100.0	-	-	6	6	100.0	2
Chiayi City	-	-	-	-	-	-	2	2	100.0	-	-	1	1	100.0	-
Kinmen County	-	-	-	-	-	-	2	2	100.0	-	-	-	-	-	-
Lienchiang County	-	-	-	-	-	4	21	21	100.0	16	-	-	-	-	-

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)					
	2010			2010			2009		
Birth cohort	2010			2010			2009		
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	169,293	165,622	97.83	169,293	163,678	96.68	194,689	186,786	95.94
Taipei City	22,019	21,573	97.97	22,019	21,462	97.47	23,742	22,806	96.06
Taichung City	20,248	19,927	98.41	20,248	19,637	96.98	23,615	22,660	95.96
Tainan City	12,054	11,841	98.23	12,054	11,793	97.83	14,700	14,228	96.79
Kaohsiung City	18,486	18,106	97.94	18,486	17,838	96.49	21,461	20,186	94.06
New Taipei City	27,320	26,126	95.63	27,320	25,836	94.57	31,817	30,634	96.28
Yilan County	3,257	3,223	98.96	3,257	3,202	98.31	3,529	3,412	96.68
Taoyuan County	15,853	15,500	97.77	15,853	15,269	96.32	18,602	18,032	96.94
Hsinchu County	4,978	4,850	97.43	4,978	4,807	96.56	6,049	5,774	95.45
Miaoli County	4,238	4,134	97.55	4,238	4,060	95.80	4,669	4,404	94.32
Changhua County	10,000	9,887	98.87	10,000	9,809	98.09	11,571	11,137	96.25
Nantou County	3,342	3,303	98.83	3,342	3,250	97.25	3,735	3,584	95.96
Yunlin County	4,832	4,810	99.54	4,832	4,749	98.28	5,563	5,418	97.39
Chiayi County	3,288	3,267	99.36	3,288	3,237	98.45	3,902	3,825	98.03
Pingtung County	5,125	5,034	98.22	5,125	4,957	96.72	5,911	5,536	93.66
Taitung County	1,675	1,630	97.31	1,675	1,596	95.28	1,788	1,665	93.12
Hualien County	2,389	2,377	99.50	2,389	2,306	96.53	2,489	2,361	94.86
Penghu County	674	673	99.85	674	668	99.11	755	736	97.48
Keelung City	2,069	2,045	98.84	2,069	2,000	96.67	2,454	2,341	95.40
Hsinchu City	4,560	4,481	98.27	4,560	4,386	96.18	5,153	4,954	96.14
Chiayi City	1,778	1,750	98.43	1,778	1,738	97.75	1,993	1,949	97.79
Kinmen County	1,017	994	97.74	1,017	990	97.35	1,077	1,030	95.64
Lienchiang County	91	91	100.00	91	88	96.70	114	114	100.00

Note 1. Source: National Immunization Information System.

2. Vaccination period: January 2009 to December 2011.

3. Data was calculated in January 2012.

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

Unit : %

Vaccines	OPV (including IPV,5in1,6in1)						Hepatitis B					
	2010			2009			2010			2010		
Birth cohort	2010			2009			2010			2010		
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	169,293	163,618	96.65	194,689	186,557	95.82	169,293	165,765	97.92	169,293	164,085	96.92
Taipei City	22,019	21,443	97.38	23,742	22,692	95.58	22,019	21,647	98.31	22,019	21,470	97.51
Taichung City	20,248	19,627	96.93	23,615	22,648	95.91	20,248	19,892	98.24	20,248	19,672	97.16
Tainan City	12,054	11,792	97.83	14,700	14,221	96.74	12,054	11,864	98.42	12,054	11,799	97.88
Kaohsiung City	18,486	17,831	96.46	21,461	20,178	94.02	18,486	18,078	97.79	18,486	17,869	96.66
New Taipei City	27,320	25,825	94.53	31,817	30,592	96.15	27,320	26,293	96.24	27,320	26,016	95.23
Yilan County	3,257	3,201	98.28	3,529	3,407	96.54	3,257	3,241	99.51	3,257	3,197	98.16
Taoyuan County	15,853	15,270	96.32	18,602	18,018	96.86	15,853	15,526	97.94	15,853	15,294	96.47
Hsinchu County	4,978	4,807	96.56	6,049	5,767	95.34	4,978	4,877	97.97	4,978	4,819	96.81
Miaoli County	4,238	4,058	95.75	4,669	4,401	94.26	4,238	4,134	97.55	4,238	4,080	96.27
Changhua County	10,000	9,808	98.08	11,571	11,134	96.22	10,000	9,884	98.84	10,000	9,829	98.29
Nantou County	3,342	3,249	97.22	3,735	3,580	95.85	3,342	3,289	98.41	3,342	3,250	97.25
Yunlin County	4,832	4,749	98.28	5,563	5,418	97.39	4,832	4,794	99.21	4,832	4,761	98.53
Chiayi County	3,288	3,236	98.42	3,902	3,824	98.00	3,288	3,247	98.75	3,288	3,237	98.45
Pingtung County	5,125	4,956	96.70	5,911	5,535	93.64	5,125	5,023	98.01	5,125	4,977	97.11
Taitung County	1,675	1,595	95.22	1,788	1,664	93.06	1,675	1,624	96.96	1,675	1,595	95.22
Hualien County	2,389	2,306	96.53	2,489	2,361	94.86	2,389	2,362	98.87	2,389	2,318	97.03
Penghu County	674	668	99.11	755	736	97.48	674	669	99.26	674	669	99.26
Keelung City	2,069	1,997	96.52	2,454	2,337	95.23	2,069	2,041	98.65	2,069	2,003	96.81
Hsinchu City	4,560	4,384	96.14	5,153	4,951	96.08	4,560	4,444	97.46	4,560	4,404	96.58
Chiayi City	1,778	1,738	97.75	1,993	1,948	97.74	1,778	1,746	98.20	1,778	1,747	98.26
Kinmen County	1,017	990	97.35	1,077	1,031	95.73	1,017	999	98.23	1,017	990	97.35
Lienchiang County	91	88	96.70	114	114	100.00	91	91	100.00	91	89	97.80

Note 1. Source: National Immunization Information System.

2. Vaccination period: January 2009 to December 2011.

3. Data was calculated in January 2012.

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

Unit : %

Vaccines	Varicella			MMR			JE					
	July, 2009 - June, 2010			2009			2009			2008		
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	184,760	178,863	96.81	194,689	190,910	98.06	194,831	187,561	96.27	199,073	183,543	92.20
Taipei City	23,030	22,272	96.71	23,742	23,203	97.73	24,213	23,112	95.45	23,318	21,356	91.59
Taichung City	22,064	21,384	96.92	23,615	23,182	98.17	23,857	22,931	96.12	24,699	22,892	92.68
Tainan City	13,430	13,147	97.89	14,700	14,503	98.66	14,919	14,415	96.62	15,418	14,639	94.95
Kaohsiung City	20,183	19,372	95.98	21,461	20,808	96.96	21,249	20,256	95.33	21,891	19,962	91.19
New Taipei City	30,338	29,083	95.86	31,817	31,139	97.87	31,844	30,662	96.29	32,596	28,986	88.93
Yilan County	3,387	3,315	97.87	3,529	3,479	98.58	3,527	3,418	96.91	3,472	3,319	95.59
Taoyuan County	17,680	17,157	97.04	18,602	18,359	98.69	18,722	18,156	96.98	19,758	18,378	93.02
Hsinchu County	5,648	5,490	97.20	6,049	5,951	98.38	6,062	5,856	96.60	6,184	5,757	93.10
Miaoli County	4,431	4,254	96.01	4,669	4,545	97.34	4,662	4,446	95.37	4,837	4,402	91.01
Changhua County	11,016	10,768	97.75	11,571	11,428	98.76	11,279	10,933	96.93	11,364	10,718	94.32
Nantou County	3,626	3,515	96.94	3,735	3,669	98.23	3,635	3,521	96.86	3,857	3,537	91.70
Yunlin County	5,316	5,210	98.01	5,563	5,502	98.90	5,503	5,373	97.64	5,742	5,500	95.79
Chiayi County	3,637	3,587	98.63	3,902	3,872	99.23	3,761	3,702	98.43	3,803	3,636	95.61
Pingtung County	5,638	5,459	96.83	5,911	5,735	97.02	5,865	5,590	95.31	6,126	5,574	90.99
Taitung County	1,715	1,640	95.63	1,788	1,746	97.65	1,761	1,677	95.23	1,833	1,633	89.09
Hualien County	2,406	2,336	97.09	2,489	2,442	98.11	2,478	2,379	96.00	2,549	2,371	93.02
Penghu County	732	720	98.36	755	747	98.94	678	668	98.53	692	657	94.94
Keelung City	2,353	2,271	96.52	2,454	2,386	97.23	2,422	2,313	95.50	2,556	2,409	94.25
Hsinchu City	5,014	4,828	96.29	5,153	5,066	98.31	5,201	5,032	96.75	5,069	4,723	93.17
Chiayi City	1,948	1,927	98.92	1,993	1,983	99.50	2,023	1,989	98.32	2,286	2,143	93.74
Kinmen County	1,058	1,020	96.41	1,077	1,051	97.59	1,060	1,022	96.42	936	867	92.63
Lienchiang County	110	108	98.18	114	114	100.00	110	110	100.00	87	84	96.55

Note 1. Source: National Immunization Information System.

2. Vaccination period: January 2008 to December 2011.

3. Data was calculated in January 2012

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	214,825	209,453	97.50	215,365	211,890	98.39	214,139	209,366	97.77	214,264	209,405	97.73
Taipei City	20,177	19,798	98.12	20,148	19,861	98.58	20,132	19,843	98.56	20,133	19,839	98.54
Taichung City	27,060	26,228	96.93	27,319	26,970	98.72	27,242	26,770	98.27	27,287	26,987	98.90
Tainan City	16,050	15,959	99.43	16,790	16,668	99.27	18,110	17,528	96.79	16,919	16,798	99.28
Kaohsiung City	23,894	23,490	98.31	23,560	23,282	98.82	20,782	20,069	96.57	23,579	23,096	97.95
New Taipei City	36,283	33,900	93.43	35,999	34,500	95.84	36,958	36,300	98.22	35,860	34,363	95.83
Yilan County	4,208	4,139	98.36	4,200	4,140	98.57	4,206	4,082	97.05	4,199	4,135	98.48
Taoyuan County	22,081	21,802	98.74	22,129	21,970	99.28	22,040	21,471	97.42	21,161	19,928	94.17
Hsinchu County	6,124	5,922	96.70	6,100	5,986	98.13	6,089	5,849	96.06	6,102	5,986	98.10
Miaoli County	5,301	5,186	97.83	5,475	5,383	98.32	5,324	5,219	98.03	5,303	5,219	98.42
Changhua County	13,049	12,995	99.59	13,141	13,091	99.62	13,040	12,708	97.45	13,044	12,994	99.62
Nantou County	4,741	4,665	98.40	4,720	4,662	98.77	4,721	4,655	98.60	4,721	4,674	99.00
Yunlin County	6,643	6,502	97.88	6,640	6,622	99.73	6,647	6,536	98.33	6,645	6,637	99.88
Chiayi County	4,522	4,502	99.56	4,525	4,505	99.56	4,531	4,475	98.76	4,529	4,500	99.36
Pingtung County	7,486	7,365	98.38	7,527	7,333	97.42	7,469	7,293	97.64	7,528	7,350	97.64
Taitung County	2,005	2,005	100.00	2,011	2,008	99.85	1,987	1,984	99.85	2,023	2,019	99.80
Hualien County	3,054	3,053	99.97	3,066	3,064	99.93	3,066	3,031	98.86	3,066	3,064	99.93
Penghu County	747	744	99.60	760	758	99.74	760	757	99.61	757	754	99.60
Keelung City	3,102	3,035	97.84	3,096	3,071	99.19	3,088	2,973	96.28	3,096	3,075	99.32
Hsinchu City	4,805	4,674	97.27	4,613	4,487	97.27	4,599	4,475	97.30	4,764	4,458	93.58
Chiayi City	2,840	2,839	99.96	2,877	2,866	99.62	2,676	2,676	100.00	2,876	2,857	99.34
Kinmen County	600	597	99.50	622	616	99.04	625	625	100.00	625	625	100.00
Lienchiang County	53	53	100.00	47	47	100.00	47	47	100.00	47	47	100.00

Note 1. Source: National Immunization Information System.

2. Vaccination period: September 2010 to December 2011 (JE: March 2011 to September 2011).

3. Data was calculated in January 2012 (JE: in October 2011).

4. Due to the delay of Tdap vaccine supply, some students received Tdap vaccination until second grade. The Tdap coverage above included those vaccinated in their first and second grades.

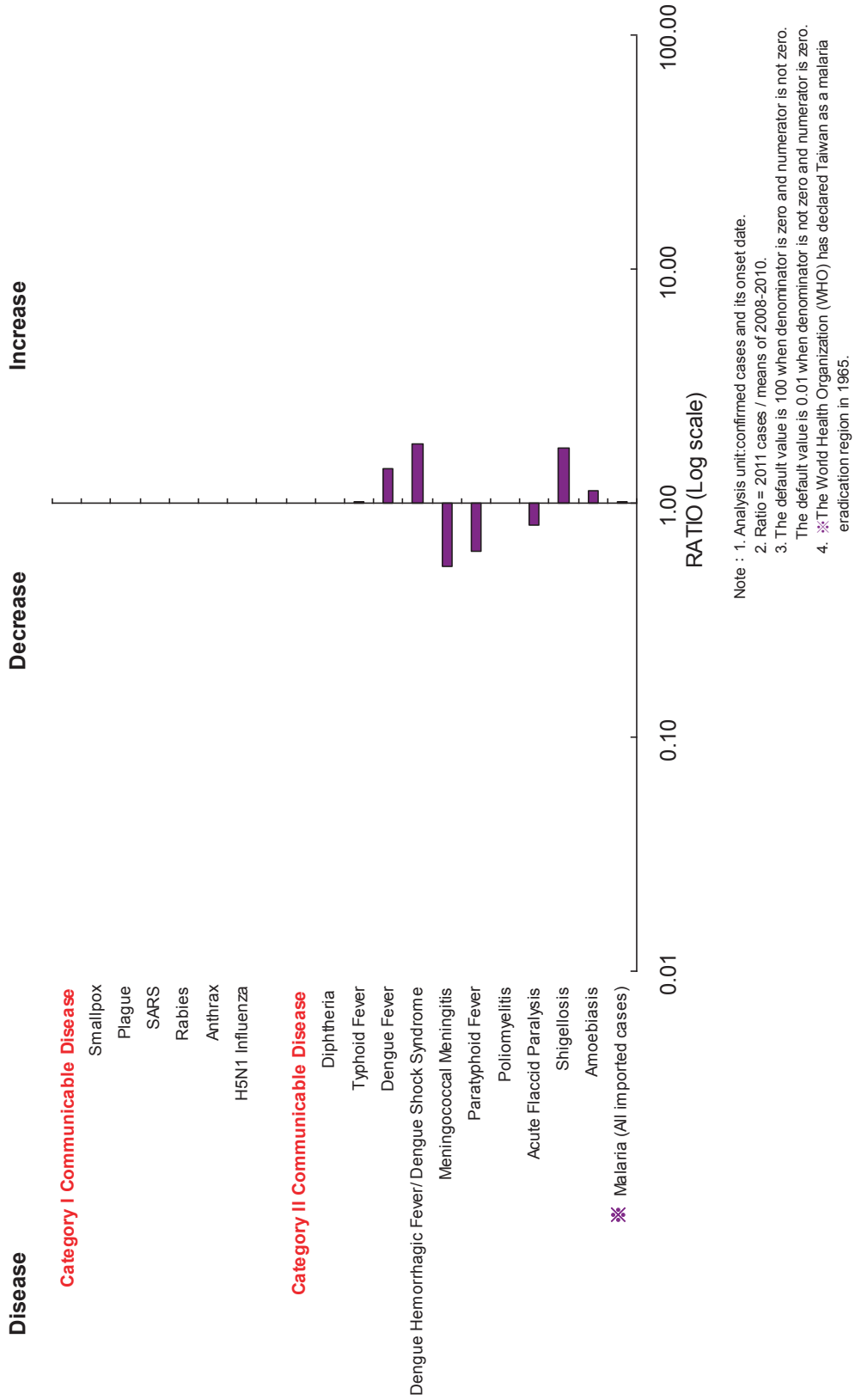
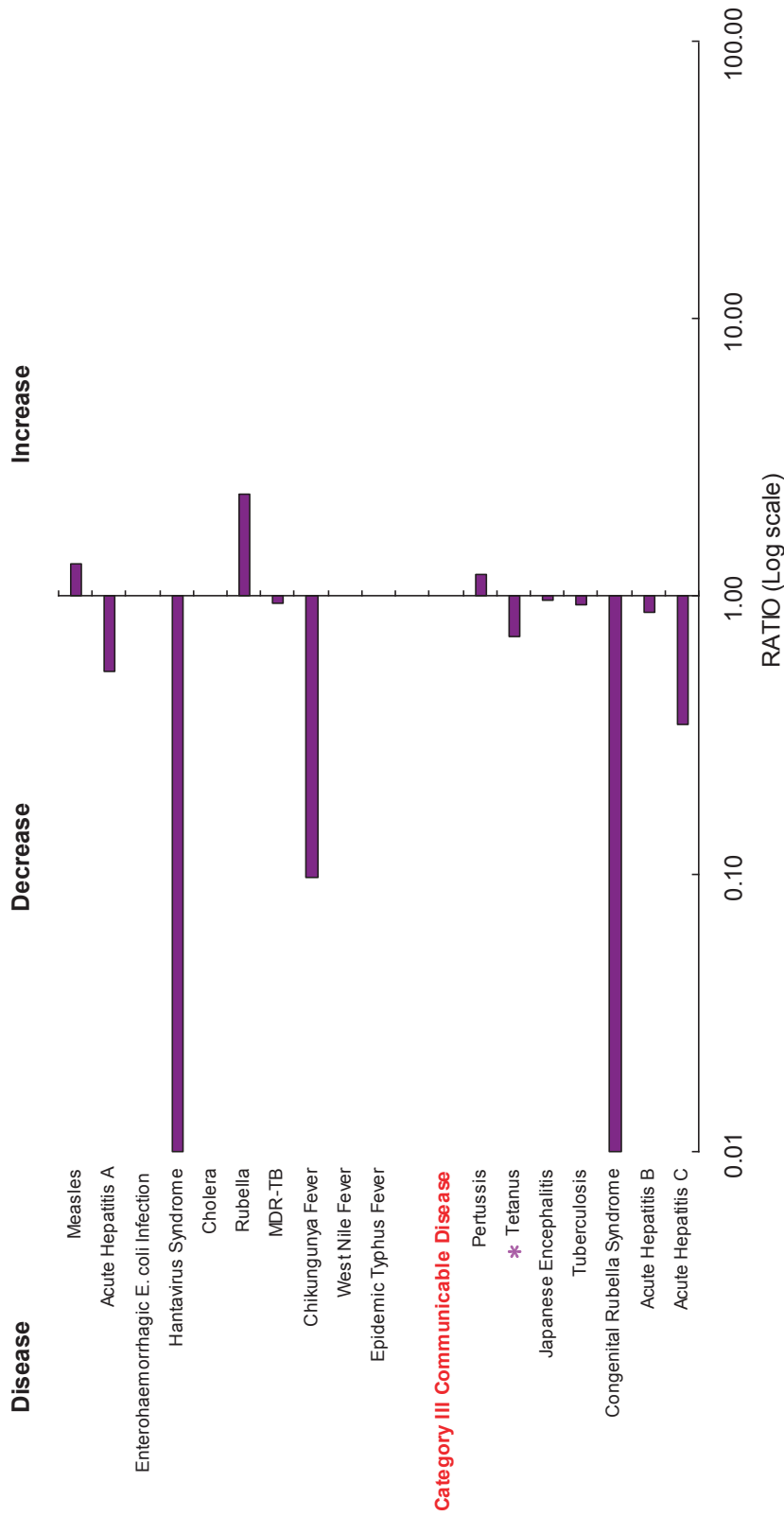


Figure 1 Comparison of 2011 total confirmed cases of notifiable diseases with historical data



Note : 1. Analysis unit: confirmed cases and its onset date.
 2. Ratio = 2011 cases / means of 2008-2010.
 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.

Figure 1 (Continued) Comparison of 2011 total confirmed cases of notifiable diseases with historical data

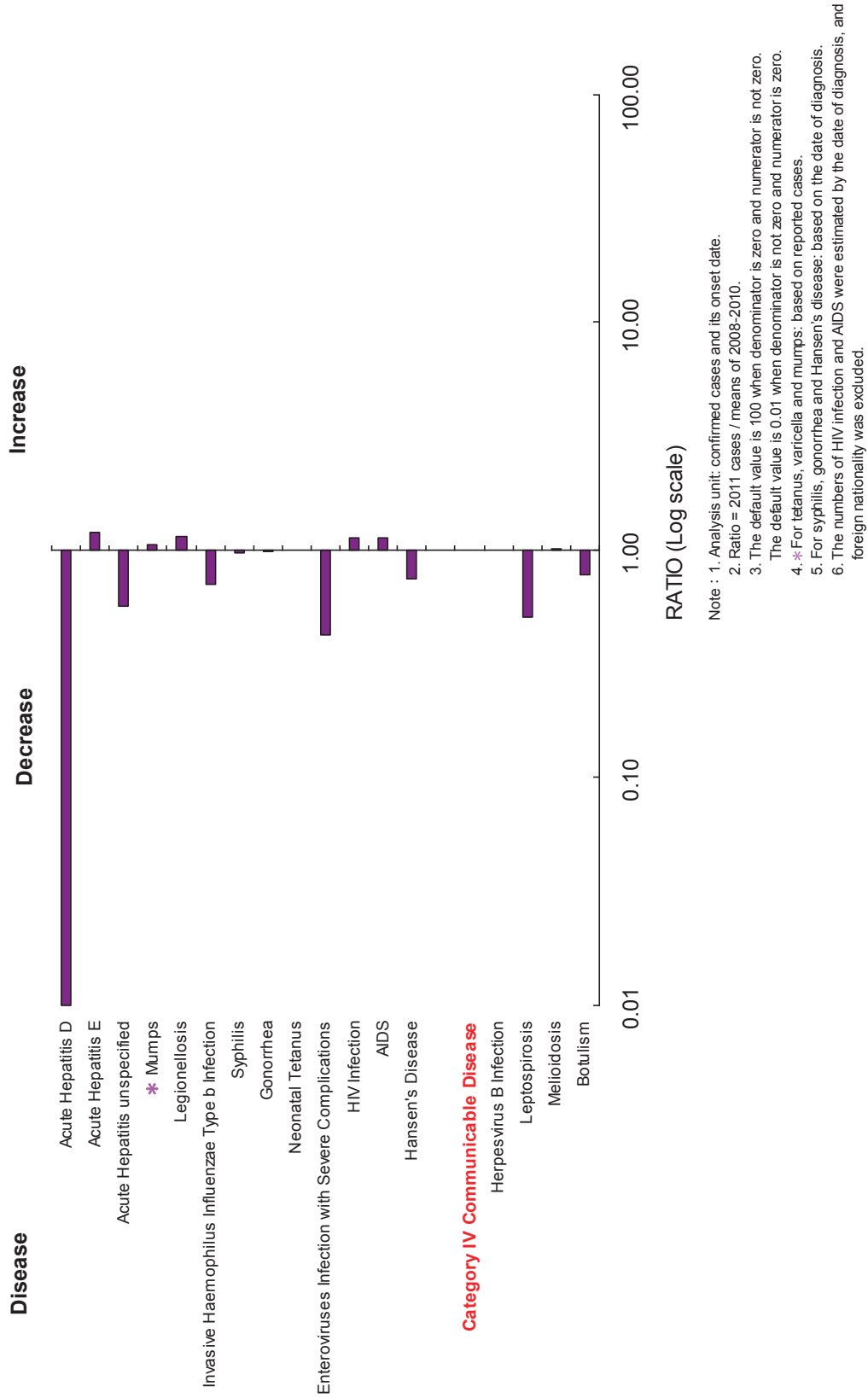
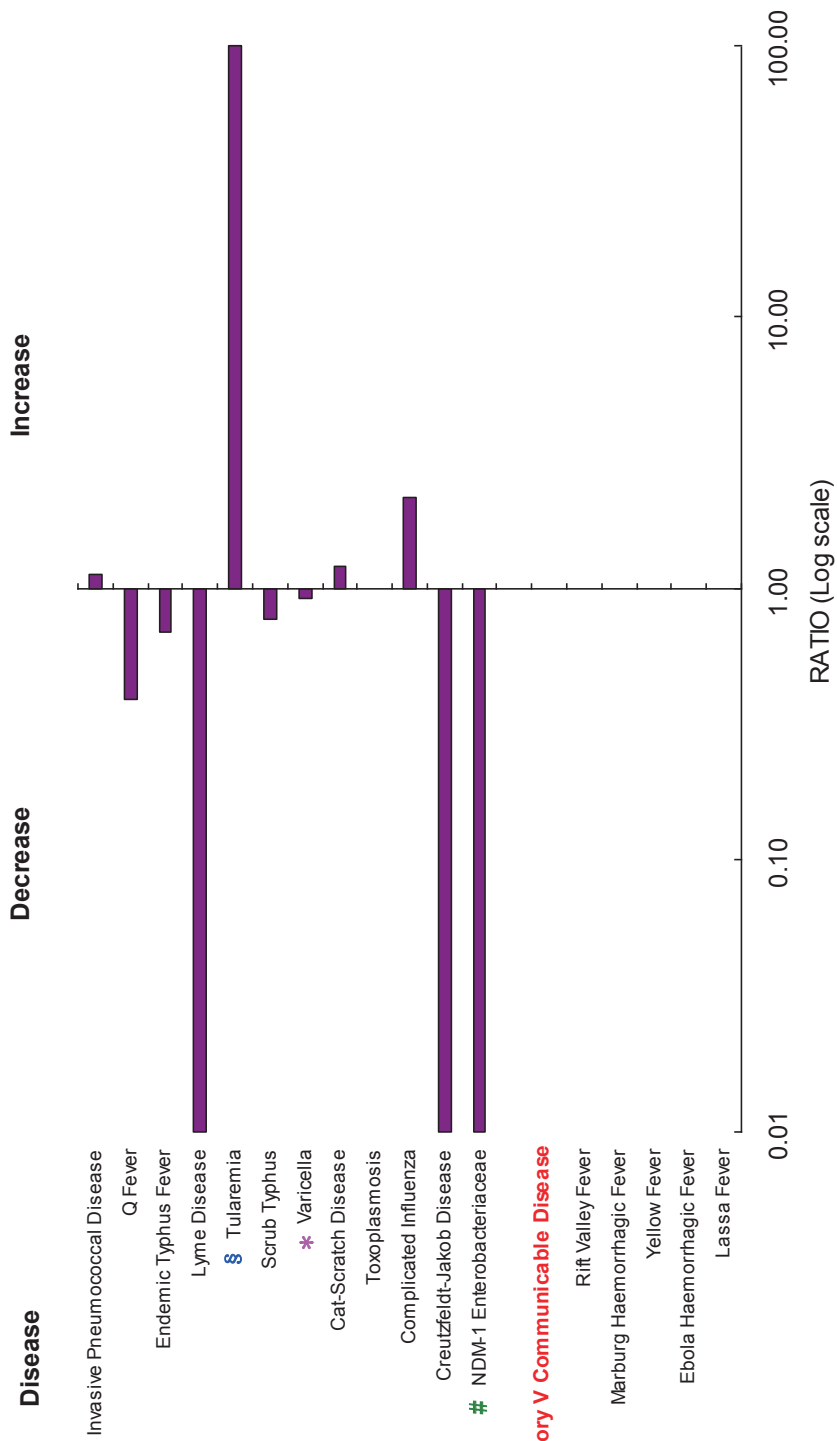


Figure 1 (Continued) Comparison of 2011 total confirmed cases of notifiable diseases with historical data



Note: 1. Analysis unit: confirmed cases and its onset date.
 2. Ratio = 2011 cases / means of 2008-2010.
 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. § In 2007 tularemia was first classified as a notifiable communicable disease in Taiwan. The first ever case confirmed in Taiwan was an imported one in 2011.
 6. # The statistics of NDM-1 Enterobacteriaceae was validated on September 9, 2010; hence, the 2011 results were compared against the September 2010 benchmark.
 7. For Creutzfeldt-Jakob Disease: based on the date of diagnosis.

Figure 1 (Continued) Comparison of 2011 total confirmed cases of notifiable diseases with historical data

2011



Statistics of Communicable Diseases
and Surveillance Report



Specific Surveillance Systems

©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 mechanism,

conveying surveillance data electronically through interchange platform, serves 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 2011. 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 2011.
2. Distribution of HAI rates by type of location in the ICUs of medical centers and regional hospitals in 2011.
3. Distribution of device-associated infection rates in the ICUs of medical centers and regional hospitals in 2011.
4. Distribution of major sites of HAI in ICU patients from medical centers and regional hospitals in 2011.
5. Common pathogens of HAI for patients in the ICUs of medical centers in 2011.
6. Common pathogens of HAI for patients in the ICUs of regional hospitals in 2011.
7. Antimicrobial resistance proportions of selected pathogens of HAI in the ICUs of medical centers and regional hospitals in 2011.

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 2011 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 796,413 patient-days with 6,858 person-times of HAI events occurred in the ICUs of 21 medical centers, the rate of infections was 8.6‰. However, in the ICUs of the 84 regional hospitals, there were 920,436 patient-days with 6,122 person-times of HAI events occurred, the rate of infections was 6.7‰. 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 surgical ICU for medical centers (10.2‰) and highest in surgical ICU for regional hospitals (8.2‰). 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 3.7‰ in medical centers and 2.4‰ in regional hospitals, and the median of central line-associated bloodstream infection (CLABSI) rates were 4.5‰ and 2.8‰ 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 0.9‰ and 0.7‰ respectively.

There were 21 medical centers and 84 regional hospitals participated in reporting HAI cases to TNIS system in 2011. The distribution of site-specific HAIs in ICUs is shown in Table 13, with the bloodstream infections topped the list in medical centers (39.8%), followed by urinary tract (35.0%), and pneumonia (11.2%). In regional hospitals, the urinary tract infections topped the list (34.3%), followed by bloodstream infections (30.8%), and pneumonia (22.1%). 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 *Escherichia coli* in medical centers and 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 65.2%, the proportion of *Klebsiella pneumoniae* isolates those were resistant to carbapenem (CRKP) is 10.7%, the proportion of *P. aeruginosa* isolates those were resistant to carbapenem (CRPA) is 18.1%, the proportion of enterococci isolates those were resistant to vancomycin (VRE) is 22.9%, and the proportion of *S. aureus* isolates those were resistant to oxacillin (MRSA) is 77.0%. Meanwhile, the antimicrobial resistance proportions of selected pathogens isolated from patients acquired HAIs in the ICUs of regional hospitals were 68.9%, 9.6%, 15.5%, 15.8% and 78.3% for CRAB, CRKP, CRPA, VRE and MRSA, respectively.

VI. 2011 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, 2011

Hospital level	1 st Quarter		2 nd Quarter		3 rd Quarter		4 th 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	1,659	20	1,701	21	1,636	20	1,973
Regional hospital	84	1,755	82	1,661	82	1,479	82	1,514

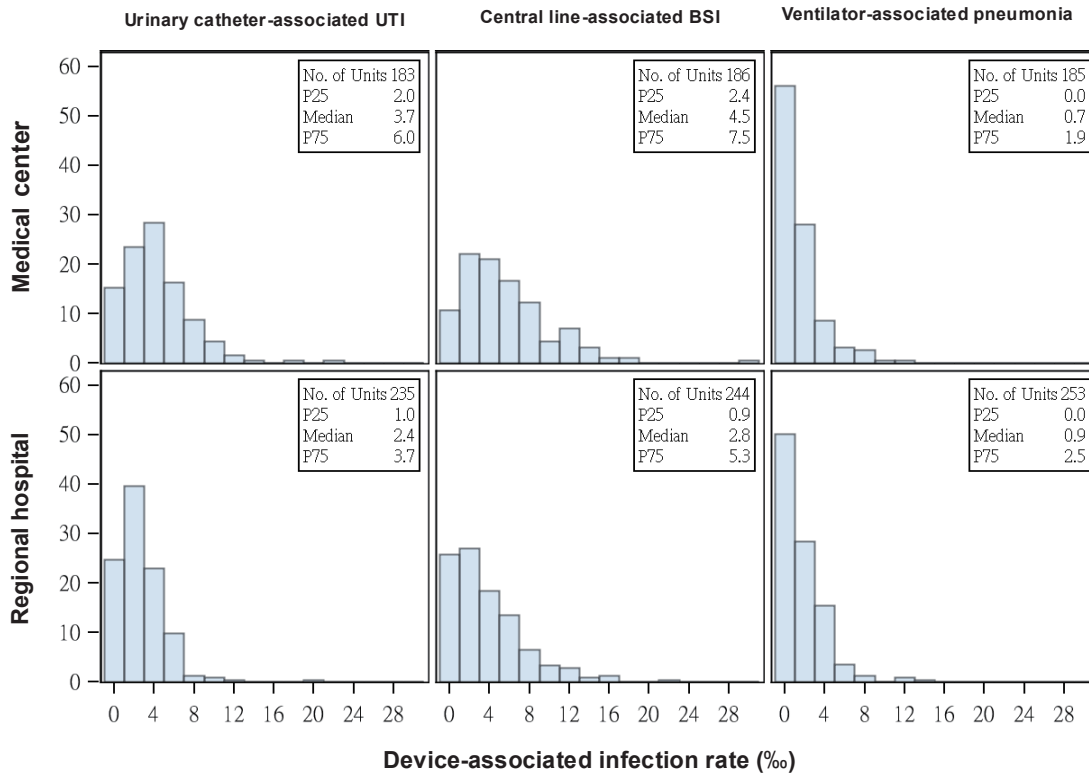
Note: Data updated to 2012/08/24

Table 12 Distribution of healthcare-associated infection rates by type of locations in the ICUs of medical centers and regional hospitals, 2011

Hospital level	Type of locations	No. of units	No. of HAIs	Patient -days	HAI Rate* (%)	Percentile		
						25th	50th	75th
Medical center	Medical ICU	51	2,394	238,338	10.0	6.9	9.3	12.4
	Surgical ICU	69	2,755	270,821	10.2	7.8	9.7	11.7
	Cardiology ICU	14	547	63,864	8.6	6.3	8.4	11.0
	Pediatric ICU	38	502	148,715	3.4	1.6	3.4	5.4
	Medical/surgical ICU	16	658	74,675	8.8	6.1	8.3	11.1
	Total	188	6,856	796,413	8.6	5.4	8.8	11.4
Regional hospital	Medical ICU	65	1,928	287,181	6.7	4.7	6.4	7.8
	Surgical ICU	49	1,462	177,543	8.2	5.7	8.0	9.5
	Cardiology ICU	12	154	37,392	4.1	2.4	3.3	4.5
	Pediatric ICU	63	71	56,813	1.2	0.0	0.0	2.2
	Medical/surgical ICU	88	2,507	361,507	6.9	4.9	6.7	8.6
	Total	277	6,122	920,436	6.7	2.6	5.5	7.9

Note: 1. Data sources were adopted by paper-based reports provided by medical centers and regional hospitals;

2. *HAI 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, 2011

Table13 Distribution of major types of healthcare-associated infection in the ICU patients from medical centers and regional hospitals, 2011

Types of infection	Medical center		Regional hospital	
	No.	%	No.	%
Urinary tract	2,439	35.0	2,200	34.3
Bloodstream	2,773	39.8	1,974	30.8
Pneumonia	782	11.2	1,417	22.1
Surgical site	393	5.6	256	4.0
Other	582	8.4	562	8.8
Total	6,969	100.0	6,409	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,2011

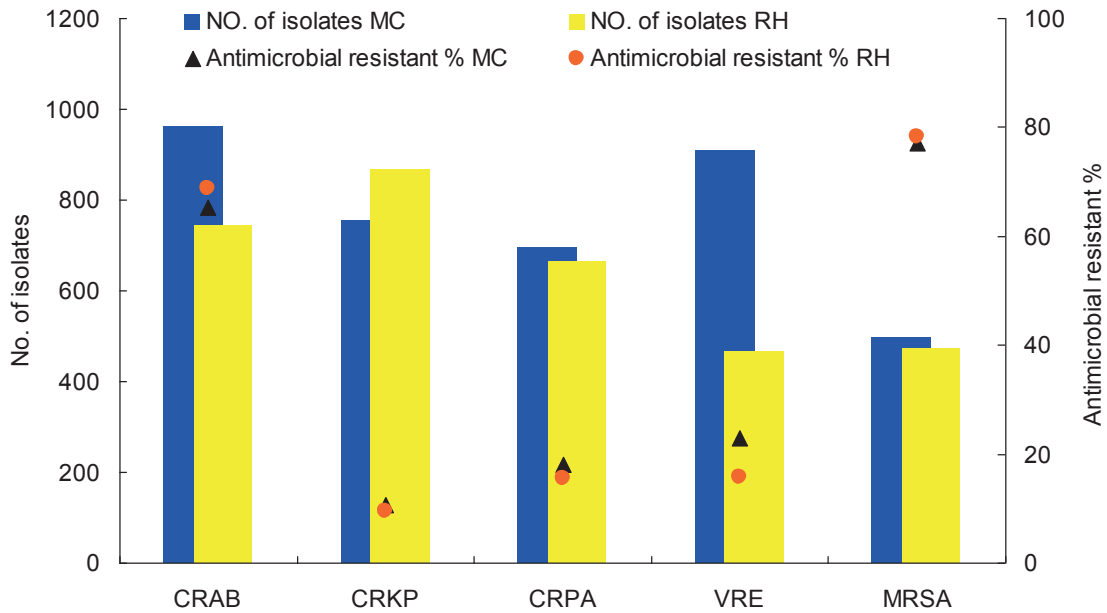
Pathogens	Types of Infection											
	Total		Urinary tract		Bloodstream		Pneumonia		Surgical site		Others	
	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.
<i>Candida spp.</i>	1		1		2		9		8		6	
<i>C. albicans</i>		709		444		198		16		22		29
Other <i>Candida spp.</i> or NOS		421		227		176		0		7		11
<i>Acinetobacter baumannii</i>	2	835	6	158	1	405	1	176	7	37	4	59
<i>Escherichia coli</i>	3	720	2	487	8	129	8	20	2	53	7	31
<i>Pseudomonas aeruginosa</i>	4	702	4	225	6	197	2	160	1	56	3	64
<i>Klebsiella pneumoniae</i>	5	587	5	171	4	254	3	86	3	49	9	27
<i>Staphylococcus aureus</i>	6	481	12	16	3	283	5	71	5	42	2	69
Yeast-like	7	475	3	382	13	54	14	8	12	12	10	19
<i>Enterobacter spp.</i>	8		7		7		6		4		8	
<i>E. cloacae</i>		283		60		128		34		35		26
Other <i>Enterobacter spp.</i> or NOS		89		16		39		15		14		5
Coagulase negative staphylococci	9	355	9	21	5	211	28	2	6	42	1	79
<i>Stenotrophomonas maltophilia</i>	10	242	13	15	9	126	4	75	9	15	11	11
Others	-	2,206	-	534	-	998	-	226	-	210	-	238
Total	-	8,105	-	2,756	-	3,198	-	889	-	594	-	668

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, 2011

Pathogens	Types of Infection											
	Total		Urinary tract		Bloodstream		Pneumonia		Surgical site		Others	
	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.
<i>Candida spp.</i>	1		1		3		9		5		6	
<i>C. albicans</i>		632		418		114		36		21		43
Other <i>Candida spp.</i> or NOS		283		155		115		4		3		6
<i>Acinetobacter baumannii</i>	2	877	6	127	2	250	1	363	6	22	1	115
<i>Escherichia coli</i>	3	759	2	513	7	127	7	61	3	35	8	23
<i>Klebsiella pneumoniae</i>	4	741	3	234	4	204	3	216	2	37	5	50
<i>Pseudomonas aeruginosa</i>	5	712	4	210	8	104	2	279	1	46	4	73
<i>Staphylococcus aureus</i>	6	519	9	30	1	262	4	130	7	21	3	76
<i>Enterobacter spp.</i>	7		8		6		5		4		7	
<i>E. cloacae</i>		236		48		103		43		20		22
Other <i>Enterobacter spp.</i> or NOS		81		10		30		23		11		7
Coagulase negative staphylococci	8	313	10	24	5	189	26	3	8	18	2	79
Yeast-like	9	224	5	139	11	49	14	12	11	10	9	14
<i>Proteus spp.</i>	10		7		14	19	13		9		10	
<i>Proteus mirabilis</i>		139		75		18		21		12		13
Other <i>Proteus spp.</i> or NOS		5		0		1		1		3		0
Others	-	1,736	-	473	-	631	-	328	-	134	-	151
Total	-	7,257	-	2,456	-	2,216	-	1,520	-	393	-	672

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, 2011

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 communicable disease in classrooms can easily turn into an epidemic. For the purpose of effectively detecting and controlling the spread of communicable diseases on school grounds, the Taiwan Centers for Disease Control (Taiwan CDC) launched a pilot program for schools to monitor and report communicable diseases in February 2001. The program started out with 20 reporting schools and now includes 658 elementary schools. By establishing the long-term trends of communicable diseases that school children are susceptible to, the program aims to achieve early detection and prevention of epidemics.

II. Objectives of surveillance system

Through the school-based surveillance system, Taiwan CDC is able to understand the trends in the incidence 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 to prevent the spread of communicable diseases in schools. Taiwan CDC also collaborates with school sanitation and hygiene education programs for the purposes of disease prevention and safeguarding the health of school children. The school-based surveillance system is a simple, flexible, specific and sensitive communicable disease surveillance and reporting system that can timely and effectively reflect the condition of communicable disease surveillance and reporting. The system also gathers communicable disease data of school children systematically for analysis and interpretation of epidemic situation as reference for evaluation and implementation of control measures. Therefore, the occurrence of communicable diseases in schools should be monitored on a continual basis to prevent the spread of those diseases to families or communities that may result in a serious epidemic.

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 more comprehensive.

III. Diseases under surveillance

Diseases reported under the school-based surveillance system include influenza-like illness, hand-foot-mouth disease or herpangina, diarrhea, fever, acute hemorrhagic conjunctivitis, and other communicable diseases.

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 Monday. Assigned staff at various substations of the Taiwan CDC supervises the upload and watch whether there are the epidemics of other communicable diseases. The weekly data are collected, analyzed, and compiled into a statistical chart that is periodically posted on the CDC's website, and fed back to the reporting schools, relevant health and education facilities through the weekly "Sentinel Surveillance Weekly Report".

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 $\geq 38^{\circ}\text{C}$) and respiratory infection; and
- (2) Muscular soreness or headache or extreme fatigue.

■ Epidemic analysis:

According to the data from the school-based surveillance system, the morbidity of influenza-like illness in schools in 2011 was between 0.07% and 0.55%, which overall is lower than that in 2009 and 2010, except in weeks 45-52 of the year, during which epidemic condition showed an uptrend.

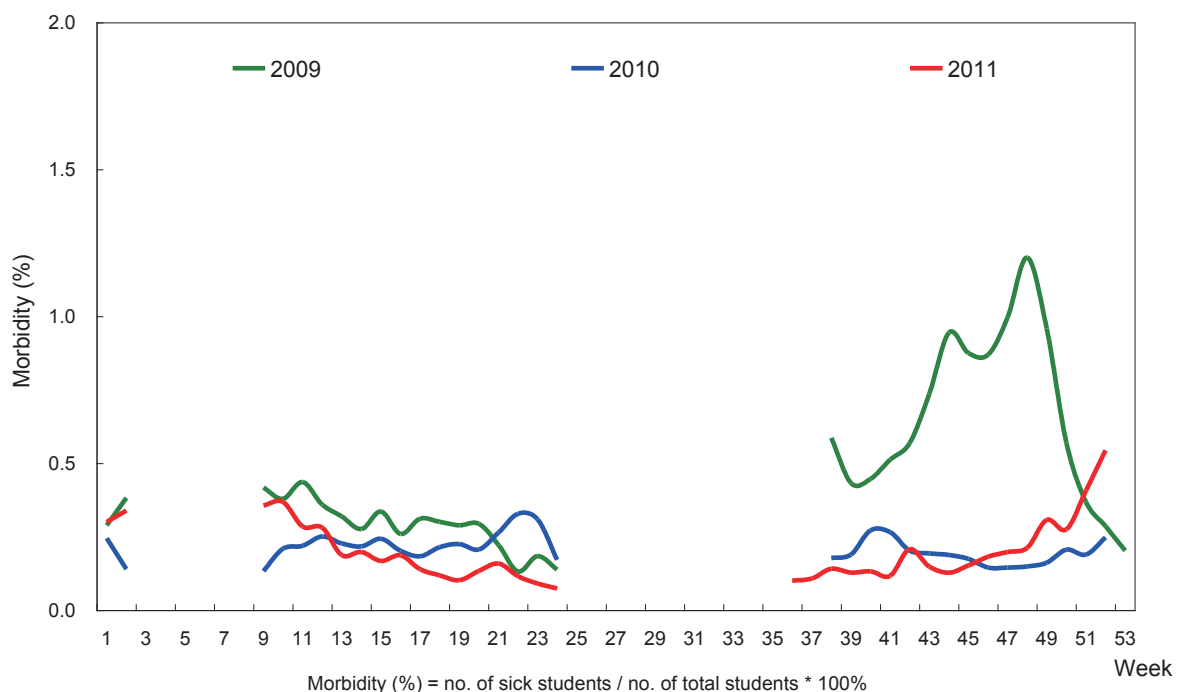


Figure 4 ILI morbidity reported by the School-based Surveillance System, 2009-2011

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 the school-based surveillance system, the morbidity of hand-foot-mouth disease or herpangina in schools in 2011 was between 0.003% and 0.111%, which overall is lower than that in 2010, except in weeks 36-52 of the year, during which epidemic condition showed an uptrend and in weeks 47-52, the morbidity was higher than that over the same period in the past two years.

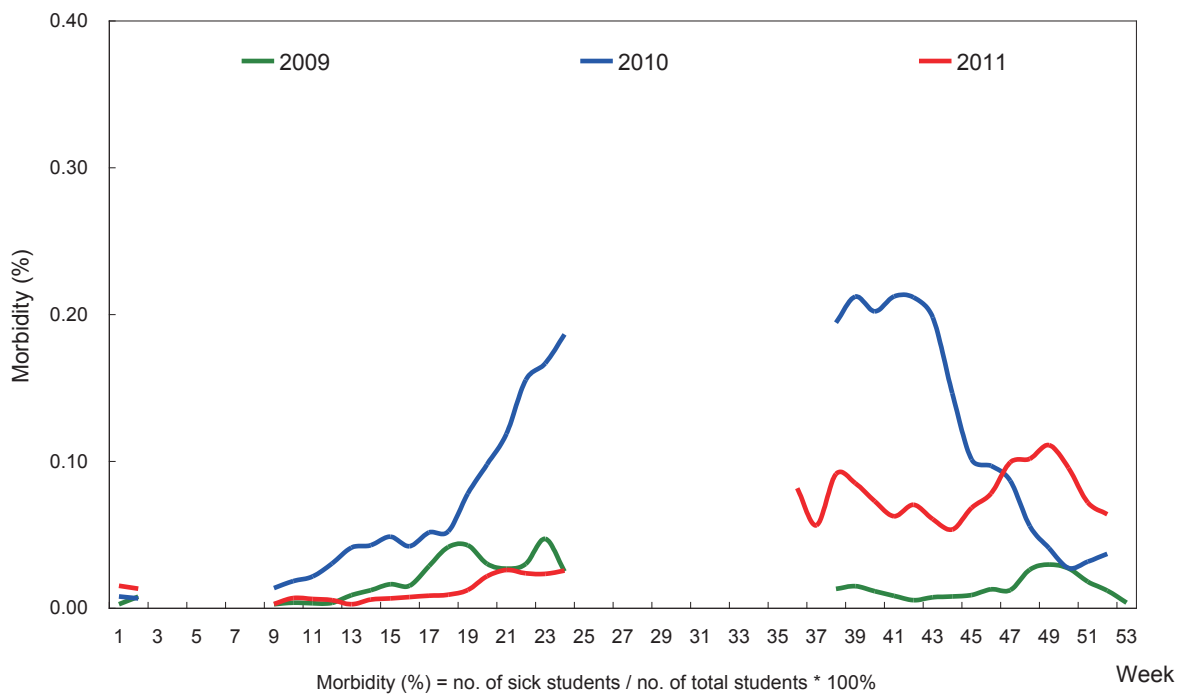


Figure 5 Enterovirus morbidity reported by the School-based Surveillance System, 2009-2011

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 the school-based surveillance system, the morbidity of diarrhea in schools in 2011 was between 0.03% and 0.20%, which overall is comparable to that in 2010, except in week 1 of the year, during which epidemic condition showed an uptrend, and overall is slightly higher than that in 2009.



Figure 6 Diarrhea morbidity reported by the School-based Surveillance System, 2009-2011

4. Fever

■ Case definition:

Fever (ear temperature $\geq 38^{\circ}\text{C}$) 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 the school-based surveillance system, the morbidity of fever in schools in 2011 was between 0.37% and 1.22%, which overall is higher than that in 2009 and 2010, particularly in weeks 49-52 of the year, during which the epidemic condition was most noticeable.



Figure 7 Fever morbidity reported by the School-based Surveillance System, 2009-2011

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 of the school-based surveillance system, the morbidity of AHC in schools in 2011 was between 0.006‰ and 0.224‰, which overall is lower than that in 2010. There were two waves of slight uptrend of AHC in 2011, which occurred respectively in weeks 15-22 and weeks 36-39 of the year, whereas epidemic condition in the rest of the year did not show significant changes.

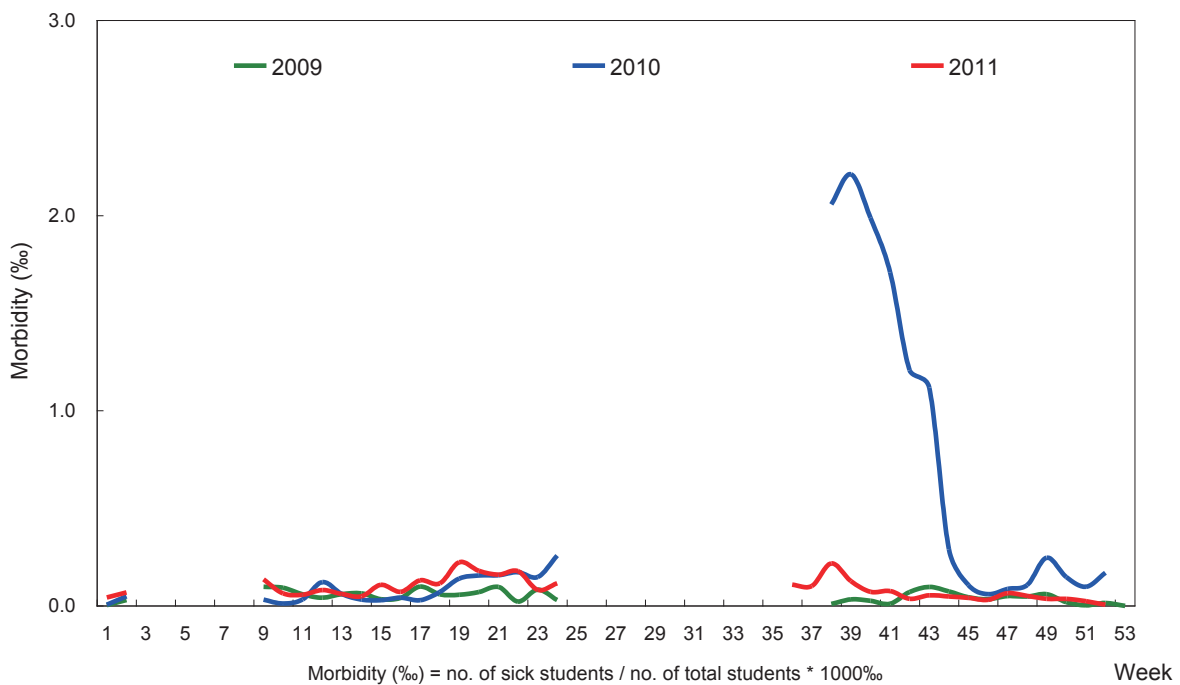


Figure 8 AHC morbidity reported by the School-based Surveillance System, 2009-2011

Laboratory Surveillance System

I. Origin

The island-wide outbreak of enterovirus epidemic in Taiwan in 1998 exposed the inadequacy of our virology laboratories in both quality and quantity. Thus the Department of Health (DOH) has been establishing contracted virology laboratories across Taiwan since March 1999. Aside from providing subsidies to the contracted laboratories, the DOH endeavors to improve Taiwan's capacity for virus testing and cultivate professionals in the field. Currently, contracted laboratories are playing an important role in the testing of enterovirus and influenza viruses throughout 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 timeliness and rates of disease detection. The laboratory surveillance targets mainly the prevalent types of enterovirus and influenza viruses in different years, their antigenicity and drug resistance that will enable Taiwan CDC to understand, 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 moreover, contributes to the construction of a valuable native viral genome database and a biomaterial database in Taiwan.

II. Distribution and responsibility areas of contracted laboratories

There were 12 contracted virology laboratories nationwide in 2011. 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 New Taipei City and specimens from military hospitals), and Taipei Veterans General Hospital (covering Keelung City and Yilan County); Central Area - China Medical University Hospital (covering Miaoli County, Nantou County and part of Taichung City), Taichung Veterans General Hospital (covering greater Taichung area), Changhua Christian Hospital (covering Changhua County and Yunlin County); Southern Area - National Cheng Gung University Hospital (covering greater Tainan area, Chiayi County and Chiayi City), Kaohsiung Medical University Chung-Ho Memorial Hospital (covering part of Kaohsiung City, Pingtung County and Penghu County), Kaohsiung Veterans General Hospital and Chang Gung Memorial Hospital Kaosiung Branch (both covering greater Kaohsiung area); 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 patients visiting of emergency room 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°C, 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 have been collected within three days after the onset. In principle, each specimen collecting site should collect at least 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 cases of enteroviruses infection with severe complications and complicated influenza. The specimens are collected by the reporting hospitals and transported to the contracted laboratories for testing with the assistance of the local health bureau. The results can be used as reference for clinical diagnoses of the individual cases.

1. Collection of specimens

Specimens collected in 2011 totaled 24,200, averaging 2,016 specimens a month. The Central Area provided the most specimens with 8,782 cases, whereas the Eastern Area had the fewest specimens with 1,706 cases.

2. Prevalence of enterovirus

In 2011, 2,172 strains of enterovirus were isolated. After typing by immunofluorescence assay (IFA), it was found the dominant type was coxsackie virus A (1,658 or 76.3%), followed by 349 strains of enterovirus type 71 (16.1%), 93 strains of coxsackie virus B (4.3%), 13 strains of echovirus (0.6%), while 58 strains (2.7%) were non-polio enterovirus (NPEV).

Of the 1,658 strains of coxsackie virus A isolated, the dominant virus was coxsackie virus A10 (67.9%), followed by coxsackie virus A4 (12.9%). Of the coxsackie virus B isolated, the dominant type was coxsackie virus B5 (84.9%). Of the Echovirus isolated, echovirus type 6 and type 9 were the dominant types with 30.8% each (Figure 9).

After typing of NPEV by gene sequencing, it was found the majority of NPEV were echovirus type 16, followed by coxsackie virus A9, coxsackie virus B3, coxsackie virus A10, coxsackie virus A21, and coxsackie virus A5.

To sum up, the top five types of enterovirus isolated in 2011 were coxsackie virus A10 (51.8%), enterovirus type 71 (16.1%), coxsackie virus A4 (9.9%), coxsackie virus A9 (5.1%), and coxsackie virus A2 (4.3%). Statistics are shown in Figure 10.

3. Prevalence of influenza virus

In 2011, 3,451 strains of influenza virus were isolated, including 1,044 strains (30.3%) of influenza A(H1N1)pdm09 virus, 257 strains (7.4%) of influenza virus type AH3 and 2,145 strains of influenza virus type B (62.2%) were isolated. The influenza A(H1N1)pdm09 virus was the prevalent virus strain during weeks 1-9 of the year, while influenza B virus was the prevalent strain after week 10 (Figure 11).

After typing of isolated virus strains by gene sequencing, it was found all influenza A(H1N1) pdm09 virus strains were A/California/07/2009, while no influenza A (H1N1) strain was found among seasonal influenza A viruses. All influenza A(H3N2) were A/Perth/16/2009. Of the influenza B viruses, B/Brisbane/60/2008 (B/Vic) was the dominant type (the strain recommended for inclusion in the vaccine of the year) at the beginning of the year, whereas B/Florida/4/2006 (B/Yam) was prevalent at the end of the year, and few B/Malaysia/2506/2004 (B/Vic) were isolated.

To sum up, the influenza virus types isolated in 2011 are ranked in sequence as influenza B, influenza A(H1N1)pdm09 and influenza A(H3). Statistics are shown in Figure 12.

4. Other respiratory tract viruses

Respiratory tract viruses other than influenza virus were isolated in 4,488 cases, including Adenovirus (73.2%), Parainfluenza virus (13%), Herpes simplex virus (HSV, 8.3%), Respiratory syncytial virus (RSV, 3.6%) and Cytomegalovirus (CMV, 1.9%). Data is shown in Figure 13.

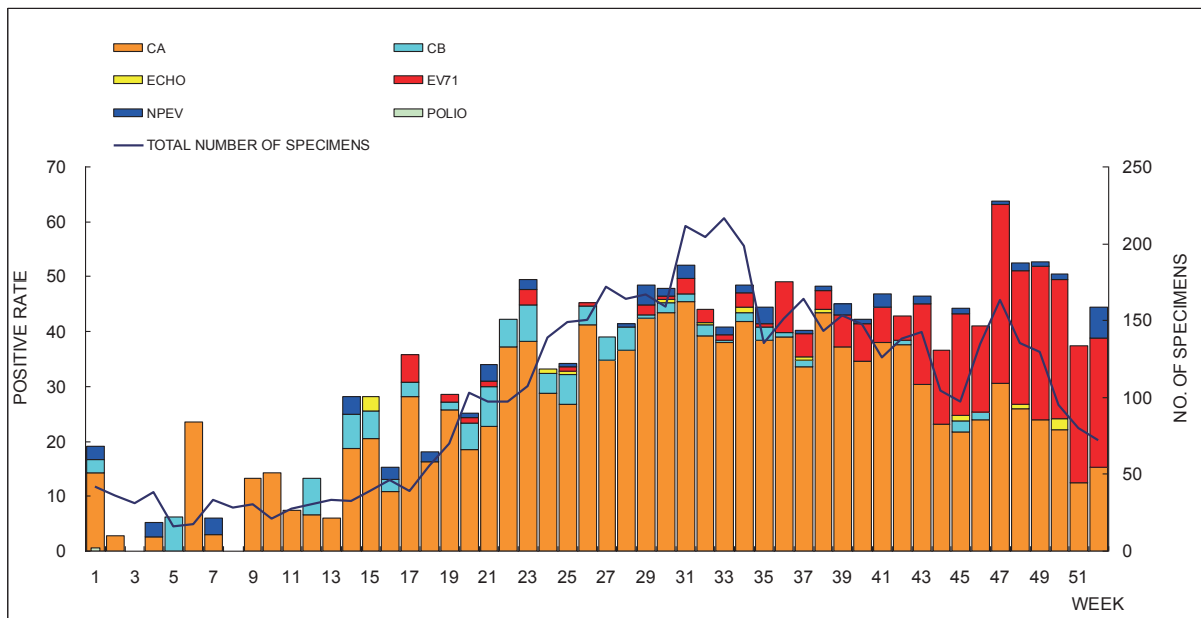


Figure 9 Enterovirus positive isolation rates in specimens collected by the sentinel physicians, 2011

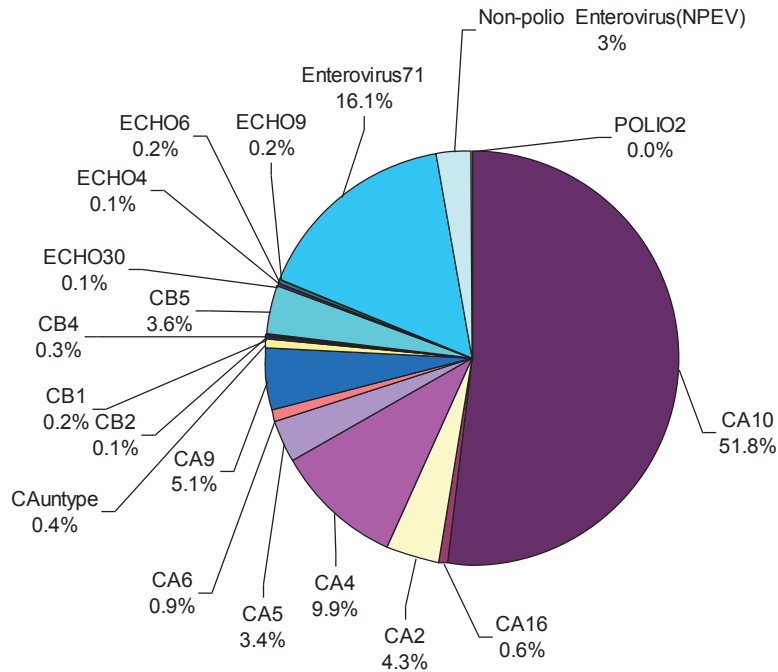


Figure 10 Strain ratios of enterovirus isolates from specimens collected by the sentinel physicians, 2011

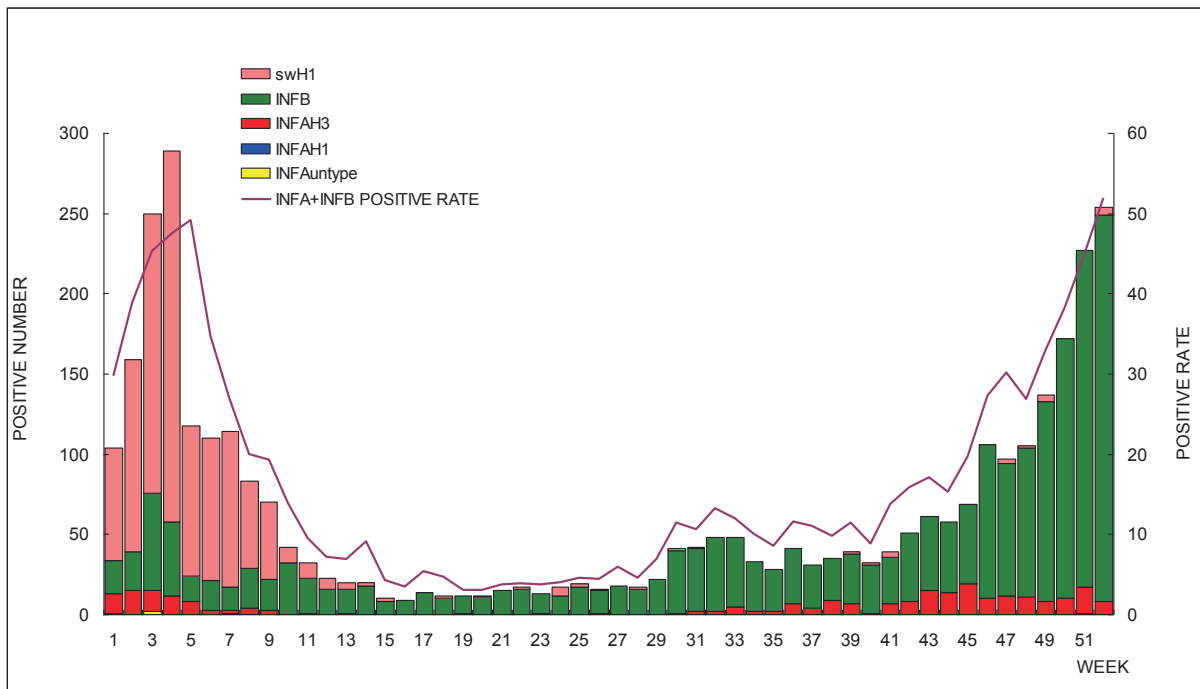


Figure 11 Isolation situations of influenza viruses from specimens collected by the sentinel physicians, 2011

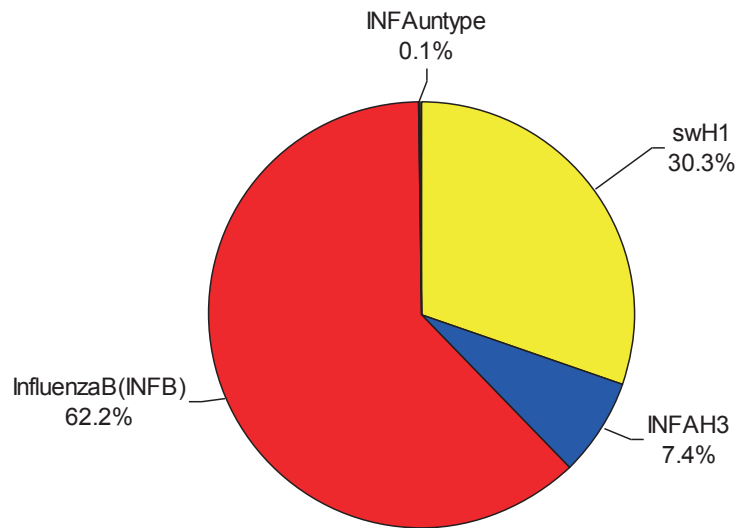


Figure 12 Strain ratios of influenza virus isolates from specimens collected by the sentinel physicians, 2011

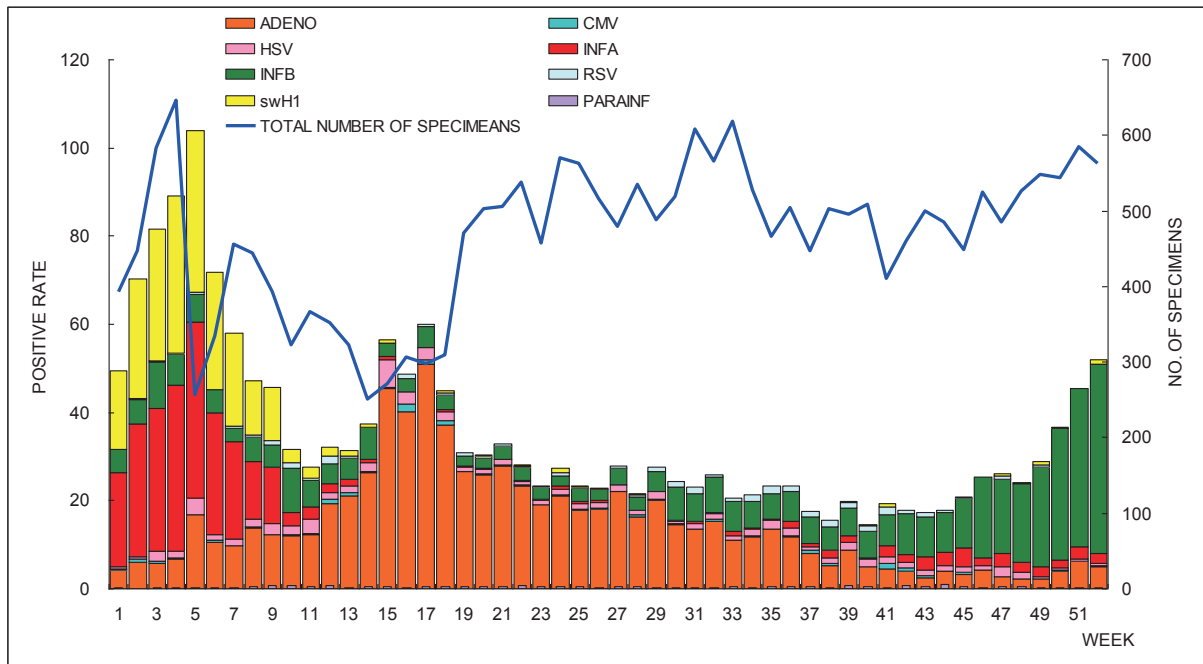


Figure 13 Positive isolation rates for respiratory tract viruses from specimens collected by the sentinel physicians, 2011

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.

The Regulations Governing Management of the Health Examination of Employed Aliens was amended on January 25, 2011. For foreign workers' periodic health examinations, if *Entamoeba histolytica* is detected positive, the examination is considered qualified when three consecutive reexaminations in 75 days are detected negative.

Foreign workers who are found to have intestinal parasites (excluding amoebiasis) may have a treatment and recheck period of 45 days; those who are detected amoebiasis in periodic health examinations may have a treatment and recheck period of 75 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 three 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 505,085 person-times health examinations conducted on foreign workers in Taiwan in 2011, 3,246 person-times were unqualified, representing a unqualified rate of 0.64%, of which, intestinal parasite diseases accounted for the highest unqualified rate with 2,481 person-times (0.49%), followed by chest X-ray tested for tuberculosis where 632 person-times (0.13%) were

unqualified. On top of that, 103 people were tested positive for HIV antibody. (Table 16)

II. Health declaration of inbound passengers

To prevent the import of communicable diseases through aircrafts and ships into Taiwan, Taiwan CDC in accordance with the “Communicable Diseases Control Act” and “Regulations Governing Quarantine at Ports” implements necessary quarantine measures--in particular, the follow ups and surveillance of passengers with symptoms. Starting from July 1, 2002, inbound passengers with suspected symptoms should fill in the “Symptom Declaration Form”, but the form was replaced with the “SARS and Other Communicable Diseases Control Survey Form” on March 30, 2003 that is now obligatory for all inbound passengers due to the serious SARS epidemics in the world. In January, 2004, another new form, the “Communicable Disease Survey Form”, was adopted. In consideration of beneficial results, manpower and material resources, on December 1, 2004, new regulations took effect that all inbound passengers with suspected symptoms of communicable diseases should fill in the “Communicable Disease Survey Form.”

From January to December of 2011, the number of inbound passengers was 15,648,884, and 14,930 of them showed symptoms were then subject to follow ups and surveillance by local health units. The “Communicable Disease Survey Form” and body temperature screening measures have identified 1 Typhoid fever case, 1 Malaria case, 15 Varicella cases, 2 Rubella cases, 81 dengue fever cases, 29 shigellosis cases, 1 chikungunya fever case. In addition, in the section of communicable diseases not included on the list of notifiable communicable diseases, Taiwan CDC found 5 cases of *Vibrio parahaemolyticus*, 10 cases of salmonella and 1 case of *Vibrio cholerae* (*Vibrio cholerae* serogroup non-O1, non-O139). (Table 17)

Table 16 Physical examinations status of foreign labors, 2011

Unit : person, %

Country	Physical Examinations		Failed	X-ray	HIV	Syphilis	Parasites	Hansen's disease	Mental condition	Others
Thailand	At Entry	32,180	36 0.11%	13 0.04%	2 0.01%	-	21 0.07%	-	-	-
	Periodic	67,442	478 0.71%	105 0.16%	27 0.04%	2 0.00%	344 0.51%	-	-	-
Indonesia	At Entry	56,407	114 0.20%	33 0.06%	10 0.02%	5 0.01%	66 0.12%	-	-	-
	Periodic	146,554	1,089 0.74%	207 0.14%	28 0.02%	10 0.01%	844 0.58%	-	-	-
Philippines	At Entry	26,832	38 0.14%	10 0.04%	3 0.01%	-	25 0.09%	-	-	-
	Periodic	74,284	630 0.85%	181 0.24%	20 0.03%	9 0.01%	420 0.57%	-	-	-
Malaysia	At Entry	2	-	-	-	-	-	-	-	-
	Periodic	-	-	-	-	-	-	-	-	-
Vietnam	At Entry	33,896	45 0.13%	4 0.01%	3 0.01%	-	38 0.11%	-	-	-
	Periodic	67,487	816 1.21%	79 0.12%	10 0.01%	4 0.01%	723 1.07%	-	-	-
Mongolia	At Entry	-	-	-	-	-	-	-	-	-
	Periodic	1	-	-	-	-	-	-	-	-
Others	At Entry	-	-	-	-	-	-	-	-	-
	Periodic	-	-	-	-	-	-	-	-	-
Total	At Entry	149,317	233 0.16%	60 0.04%	18 0.01%	5 0.00%	150 0.10%	-	-	-
	Periodic	355,768	3,013 0.85%	572 0.16%	85 0.02%	25 0.01%	2,331 0.66%	-	-	-
Total		505,085	3,246 0.64%	632 0.13%	103 0.02%	30 0.01%	2,481 0.49%	-	-	-

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 2011

Month	Inbound passenger No.	Cases with symptom		Pathogen detected		Note (Traveling country)
		Case No.	Case percentage (%)	Notifiable disease (case No.)	Others (case No.)	
Jan.	1,176,022	2,594	0.22	Varicella (2), Dengue fever (5), Shigellosis (3)	Vibrio parahaemolyticus(1)	Cambodia(Varicella) / Thailand, Myanmar, Philippines, Malaysia(Dengue fever) / Indonesia, Philippines(Shigellosis) / Thailand(Vibrio parahaemolyticus)
Feb.	1,110,063	1,726	0.16	Varicella (3), Rubella (2), Dengue fever (9), Shigellosis (2)		Thailand, Vietnam, China(Varicella) / Vietnam(Rubella) / Indonesia, Vietnam, Philippines, Singapore, Malaysia(Dengue fever) / Philippines, Cambodia(Shigellosis)
Mar.	1,205,734	1,049	0.09	Malaria (1), Shigellosis (3)	Vibrio parahaemolyticus(2)	Thailand(Malaria) / Philippines, Cambodia, China (Shigellosis) / Indonesia, Philippines(Vibrio parahaemolyticus)
Apr.	1,302,696	1,131	0.09	Varicella (4), Dengue fever (3), Shigellosis (3)	Vibrio parahaemolyticus (2), Salmonella (1)	Indonesia, Hong Kong(Varicella) / Indonesia, Vietnam(Dengue fever) / Thailand, Philippines, China(Shigellosis) / Philippines, Malaysia(Vibrio parahaemolyticus) / China(Salmonella)
May	1,245,048	964	0.08	Varicella (1), Dengue fever (2), Shigellosis (1)	Salmonella (4), Vibrio cholerae(1) (not included in the list of notifiable communicable diseases)	Thailand(Varicella) / Indonesia, Thailand(Dengue fever) / Cambodia(Shigellosis) / Thailand(Vibrio cholerae) / Thailand, Cambodia(Salmonella)
Jun.	1,318,424	1,215	0.09	Varicella (1), Dengue fever (7)	Salmonella (2)	Thailand(Varicella) / Indonesia, Myanmar, Thailand, Vietnam, Philippines, Bangladesh, Malaysia(Dengue fever) / Thailand(Salmonella)
Jul.	1,484,058	1,563	0.11	Dengue fever (8), Shigellosis (6)	Salmonella (3)	Indonesia, Thailand, Vietnam, Philippines, Singapore, Malaysia(Dengue fever) / Indonesia, Hong Kong, Cambodia, Nepal, China(Shigellosis) / Hong Kong, Malaysia(Salmonella)
Aug.	1,445,060	1,338	0.09	Varicella (2), Dengue fever (11), Shigellosis (8)		Japan, China(Varicella) / Indonesia, Thailand, Vietnam, Philippines, Cambodia, Singapore, Malaysia (Dengue fever) / Indonesia, Vietnam, Korea, Philippines, China(Shigellosis)
Sep.	1,301,389	821	0.06	Chikungunya fever (1), Dengue fever (8), Shigellosis (1)		Philippines(Chikungunya fever) / Indonesia, Thailand, Vietnam, Philippines(Dengue fever) / Philippines(Shigellosis)
Oct.	1,366,708	813	0.06	Varicella (1), Dengue fever (11), Shigellosis (1)		Indonesia(Varicella) / India, Thailand, Philippines, Cambodia, Bangladesh(Dengue fever) / Philippines(Shigellosis)
Nov.	1,340,776	732	0.05	Varicella (1), Typhoid fever (1), Dengue fever (8), Shigellosis (1)		Malaysia(Varicella) / Indonesia(Typhoid fever) / Indonesia, Thailand, Philippines, Singapore, Malaysia(Dengue fever) / Indonesia(Shigellosis)
Dec.	1,352,906	984	0.07	Dengue fever (9)		Indonesia, India, Vietnam, Thailand, Philippines, Bangladesh, Malaysia(Dengue fever)
Total	15,648,884	14,930	0.10	Typhoid fever (1), Malaria (1), Varicella (15), Chikungunya fever (1), Rubella (2), Dengue fever (81), Shigellosis (29)	Vibrio parahaemolyticus (5), Salmonella (10), Vibrio cholerae(1) (not included in the list of notifiable communicable diseases)	

Mosquito Surveillance

Taiwan is located in tropical and subtropical climate zone with hot and humid weather, and hence a fertile ground for mosquito breeding. Major mosquito vectors in Taiwan include *Aedes aegypti* and *Aedes albopictus* that can spread dengue fever and *Anopheles minimus* that can spread 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 2011 finds the following: the health bureaus of all counties and cities conducted 45,119 wards/villages, including 22,516 wards/villages in Level 0, 15,075 wards/villages in Level I, 4,925 wards/villages in Level II, 1,896 wards/villages in Level III, 556 wards/villages in Level IV, 100 wards/villages in Level V, 39 wards/villages in Level VI, 6 wards/villages in Level VII, 5 wards/villages in Level VIII, and 1 wards/villages in Level IX (Table 18). The number of wards/villages above Level II displayed a rising trend from May to July, and declined after August (Figure 14).

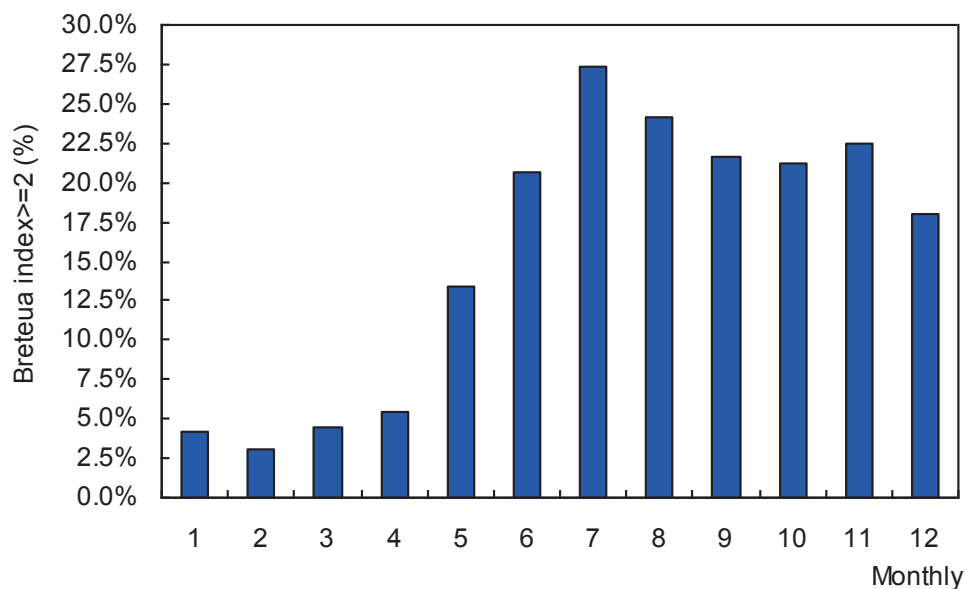


Figure 14 The percentage of wards/villages with Dengue fever vector by month in 2011

Table 18 Distribution of Breteua index, 2011

Locality	Villages (No.of times)	Breteua Index									
		0	1	2	3	4	5	6	7	8	9
Taichung City	1,435	624	760	50	1	-	-	-	-	-	-
Taipei City	2,115	1,319	651	122	20	2	1	-	-	-	-
Taitung County	2,531	1,341	1,019	129	28	11	3	-	-	-	-
Tainan City	10,108	4,242	3,714	1,337	541	210	44	17	2	1	-
Yilan County	1,203	1,051	147	3	1	1	-	-	-	-	-
Hualien County	692	672	17	3	-	-	-	-	-	-	-
Kinmen County	91	71	18	2	-	-	-	-	-	-	-
Nantou County	922	652	245	24	1	-	-	-	-	-	-
Pingtung County	4,555	1,282	2,045	868	257	74	15	8	2	3	1
Miaoli County	607	63	421	114	8	1	-	-	-	-	-
Taoyuan County	1,962	1,807	146	5	3	1	-	-	-	-	-
Kaohsiung City	10,639	3,533	3,760	2,058	989	247	36	14	1	1	-
Keelung City	445	330	111	3	1	-	-	-	-	-	-
Lienchiang County	52	52	-	-	-	-	-	-	-	-	-
Yunlin County	941	722	218	1	-	-	-	-	-	-	-
New Taipei City	2,339	1,596	651	72	17	2	1	-	-	-	-
Hsinchu City	528	263	230	34	1	-	-	-	-	-	-
Hsinchu County	742	535	191	12	3	-	-	-	1	-	-
Chiayi City	634	435	197	2	-	-	-	-	-	-	-
Chiayi County	954	930	23	1	-	-	-	-	-	-	-
Changhua County	1,213	734	427	47	3	2	-	-	-	-	-
Penghu County	411	262	84	38	22	5	-	-	-	-	-
Total	45,119	22,516	15,075	4,925	1,896	556	100	39	6	5	1

II. Malaria carrying mosquito

In 2011 mosquito light traps were hanged for collection of adult mosquitoes in 94 townships and 429 villages, including Sanzhi Dist., Tamsui Dist and Shimen Dist. in New Taipei City; Bade City and Daxi Township in Taoyuan County; Emei Township and Baoshan Township in Hsinchu County; Dongshi Dist. in Taichung City; Guoxing Township in Nantou County; Fenyuan Township, Ershui 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, Huwei Township, Citong Township, Douliu City, Dounan Township and Baozhong Township in Yunlin County; Dalin Township, Minxiong Township, Taibao City, Shuishang Township, Budai Township, Dongshi Township, Lucao Township, Alishan Township and Xikou Township in Chiayi County; Zuozhen Dist., Nanhua Dist., Xinhua Dist., Nanxi Dist., Longqi Dist., and Guanmiao Dist. in Tainan City; Meinong Dist. and Mituo Dist. in Kaohsiung City; 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, Suao Township, Yuanshan Township, Datong Township and Luodong Township in Yilan County; Zhuoxi Township, Xincheng Township, Fengbin Township, Fenglin Township, Shoufeng Township, Wanrong Township, Ruisui Township, Fuli Township, Hualien City, Xiulin Township, Ji'an Township, Guangfu Township and Yuli 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, Lanyu Township and Yanping Township in Taitung County. The survey result showed that 15 townships and 28 villages had collected adult *An. minimus* (Table 19 and Figure 15). Lide Village of Manzhou Township in Pingtung County had the highest density with the record of catching 61 *An. minimus* per trap-night in September.

Table 19 The number of adult mosquitoes of *Anopheles minimus* collected in 2011

County / Township		<i>An. minimus</i> (No.)	Villages (No.)	Villages with <i>An. minimus</i>
Taitung County	Dawu	3	1	Shangwu
	Donghe	41	3	Donghe、Taiyuan、Xingchang
	Changbin	8	3	Changbin、Sanjian、Ningpu
	Chenggong	1	1	Sanxian
	Daren	1	1	Nantian
Tainan City	Longqi	79	5	Longchuan、Qiding、Daping、Tuqi、Shicao
	Guanmiao	1	1	Shanxi
	Xinhua	3	2	Lunding、Dakeng
	Zuozhen	4	1	Chengshan
Hualien County	Yuli	1	1	Neidong
	Fengbin	1	1	Jiqi
	Guangfu	7	3	Dama、Da'an、Datong
Pingtung County	Checheng	35	2	Wenquan、Tianzhong
	Manzhou	67	1	Lide
	Shizi	2	2	Neishi、Zhukeng
Total	15 townships	254	28	

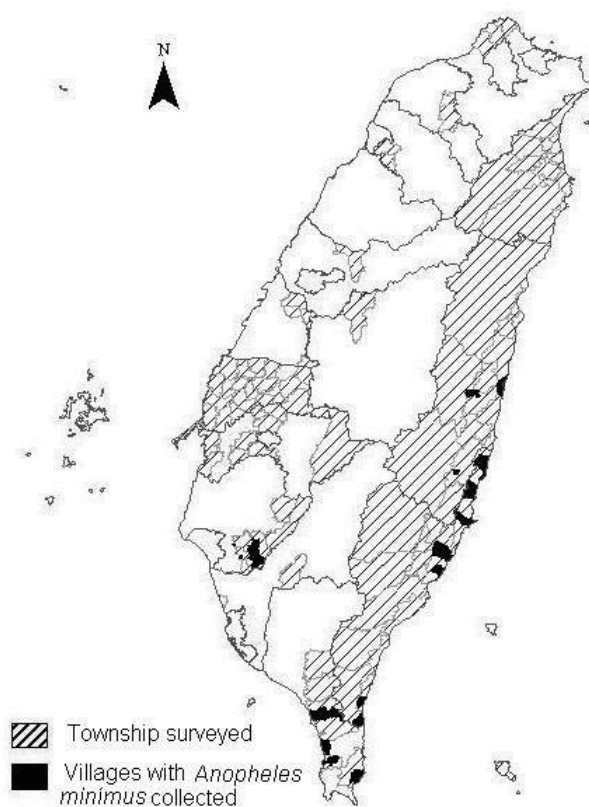


Figure 15 Distribution of *Anopheles minimus*, 2011

Symptom Surveillance System

I. Introduction

The outbreak of severe acute respiratory syndrome (SARS) in March of 2003 that nearly became a global pandemic also hit Taiwan, causing public panic and dealing 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 and caused considerable panic worldwide. To prevent the invasion of viruses, a symptom surveillance system has been established 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: H5N1 influenza cases under investigation, influenza-like illness, fever of unknown origin, diarrhea, upper respiratory infection, patients with coughing lasting for more than three weeks and enterovirus.

II. Objectives of surveillance system

1. To step up the surveillance of inbound travelers at airports and ports to achieve the goal of fighting communicable diseases outside the country.
2. Effectively control cluster events and activate related prevention programs in a timely manner.

III. Reporting method and data analysis

Medical institutions (reporting H5N1 influenza cases under investigation and diarrhea only) or health offices report cases via the Internet directly by inputting data in the communicable disease case reporting system - symptom reporting. Staff of health offices and CDC can download field data such as reports, submission of specimens and test results in the system through BO (Business Objects) 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) Having the following clinical conditions and epidemiological conditions 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 detected by the central competent authority or its designated local competent authorities, medical service (affair) institutions, academic or research institutions with laboratory capacity.

2. Epidemic analysis of test results of specimens collected from persons under investigation for H5N1 influenza: No cases were reported in 2010, while a total of 2 cases were reported in 2011, but the H5N1 test results of the reported cases were all negative.

■ Influenza-like illness clustering

1. Case definition: Cases that meet the definition of influenza-like illness for reporting purpose and with person, time and place relevance that are suspected as cluster infection with the concern of spreading.

*Definition of influenza-like illness for reporting purpose: the case should meet simultaneously the following three conditions:

- (1) Sudden onset, with fever (ear temperature $\geq 38^{\circ}\text{C}$) 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 2011, a total of 71 influenza-like illness clusters were reported. Clusters that were tested positive include 5 events of seasonal influenza virus type AH3, 24 events of influenza A(H1N1)pdm09, 27 events of seasonal influenza virus type B, and 5 events of others (including 2 events of mixed infection of type B and influenza A(H1N1)pdm09, 2 events of mixed infection of type AH3 and type B, and 1 event of adenovirus infection). The rest of reported events were tested negative or had no specimens taken. Schools had the highest incidence of influenza-like illness clusters, followed by populous institutions, hospitals, others (including workplaces and camps), and military bases.

Table 20 Test results for influenza-like illness clustering incidents in 2011

Cluster No.	Test results					
	A (H3)	A(H1N1)pdm09	B	*Others	Negative	No specimen
71	5	24	27	5	9	1

* Others: Others include 2 events of mixed infection of seasonal influenza virus type B and influenza A(H1N1)pdm09 , 2 events of mixed infection of seasonal influenza virus type A (H3) and B, and 1 event of adenovirus infection.

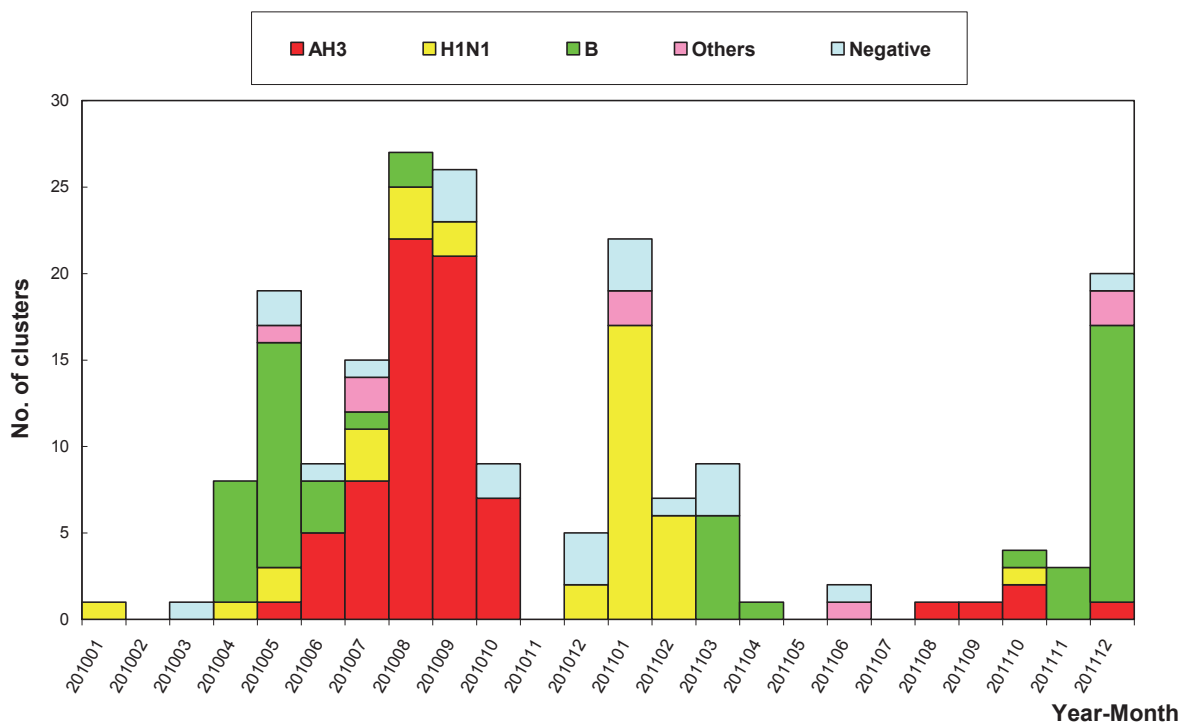


Figure 16 Evolutional trends of influenza-like illness clustering incidents in 2010-2011

Table 21 Distribution of clusters of influenza-like illness cases (by location) in 2011

Institution categories	Cluster No.
populous institutions	14
schools	38
hospitals	10
militaries	4
others	5
total	71

■ Diarrhea clustering

1. Case definition: Excluding 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 clustering: In 2011, a total of 114 diarrhea clusters were reported. Clusters that were tested positive include 70 events of norovirus, 11 events of mixed infection of norovirus and rotavirus, 6 events of rotavirus, and 8 events of other pathogens (1 event of *Shigella spp.*, 4 events of *Staphylococcus aureus*, 2 events of *Vibrio parahaemolyticus* and 1 event of *Salmonella spp.*). The rest of the reported events were negative or had no specimens taken. Schools had the highest incidence of diarrhea clusters, followed by populous institutions, hospitals, others (including workplaces, families, and tourist groups), and military bases.

Table 22 Test results for diarrhea clustering incidents in 2011

Cluster No.	Test results					
	Norovirus	Norovirus and Rotavirus	Rotavirus	*Others	Negative	No specimen
114	70	11	6	8	18	1

* Others: Others include 1 event of *Shigella spp.* infection, 4 events of *Staphylococcus aureus* infection, 2 events of *Vibrio parahaemolyticus* infection, and 1 event of *Salmonella spp.* infection.

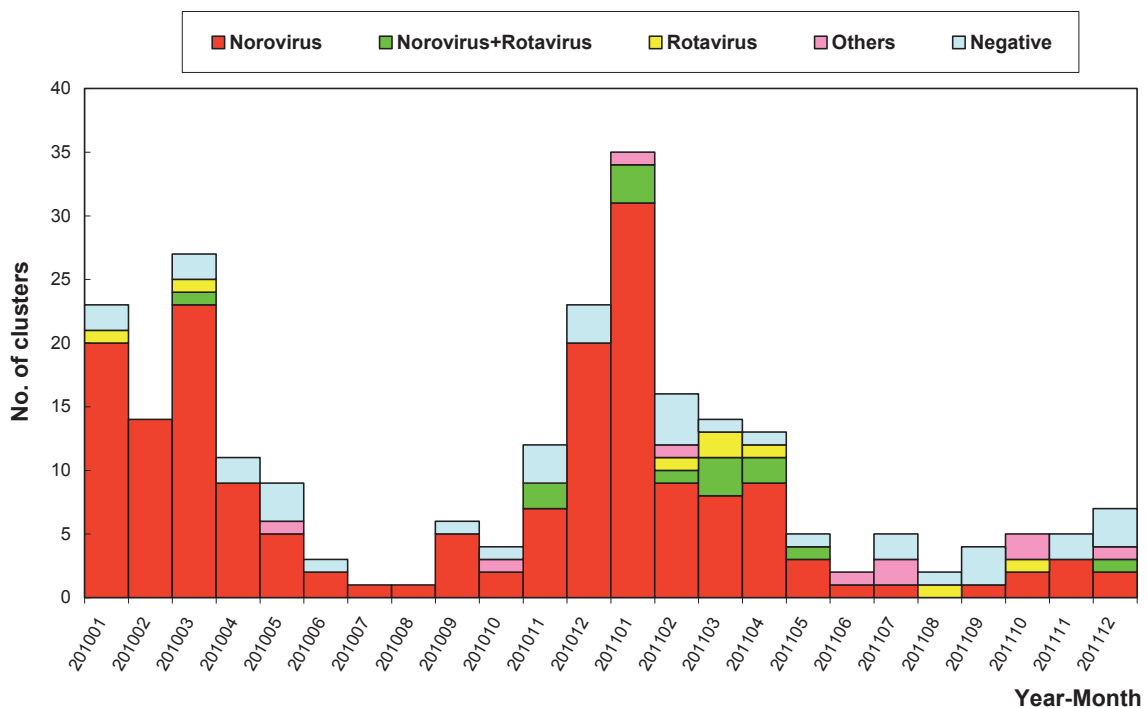


Figure 17 Evolutional trends of diarrhea clustering incidents in 2010-2011

Table 23 Distribution of clusters of diarrhea cases (by location) in 2011

Institution categories	Cluster No.
populous institutions	19
schools	70
hospitals	12
militaries	2
others	11
total	114

■ 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 2011, a total of 76 URI clusters were reported. Clusters that were tested positive include 1 event of seasonal influenza virus type AH3, 14 events of influenza A(H1N1)pdm09, 26 events of seasonal influenza virus type B, and 16 events of others (including 6 events of adenovirus, 4 events of respiratory syncytial virus, 1 event of mixed infection of adenovirus and respiratory syncytial virus, 2 events of enterovirus, 1 event of mixed infection of seasonal influenza virus type B and influenza A(H1N1)pdm09, 1 event of mixed infection of seasonal influenza virus type AH3 and B, and 1 event of mixed infection of parainfluenza virus and mycoplasma). The rest of the reported events were tested negative or had no specimens taken. Schools had the highest incidence of URI clusters, followed by populous institutions, hospitals, military bases and others (including families and tourist groups).

Table 24 Test results for upper respiratory tract infection clustering incidents in 2011

Cluster No.	Test results					
	A (H3)	A(H1N1)pdm09	B	*Others	Negative	No specimen
76	1	14	26	16	15	4

* Others: Others include 6 events of adenovirus infection, 4 events of respiratory syncytial virus (RSV) infection, 1 event of mixed infection of adenovirus and RSV, 2 events of enterovirus infection, 1 event of mixed infection of seasonal influenza virus type B and influenza A (H1N1)pdm09, 1 event of mixed infection of seasonal influenza virus type A (H3) and B, and 1 event of mixed infection of parainfluenza virus and mycoplasma.

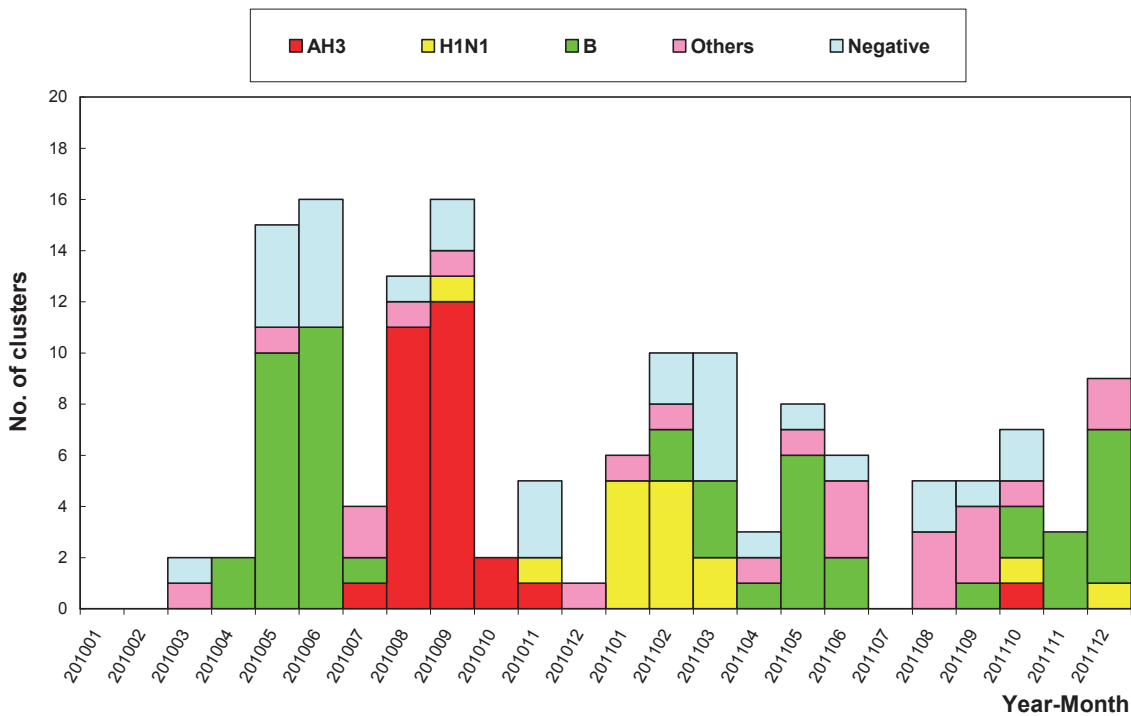


Figure 18 Evolutional trends of upper respiratory tract infection clustering incidents in 2010-2011

Table 25 Distribution of clusters of upper respiratory tract infection cases (by location) in 2011

Institution categories	Cluster No.
populous institutions	24
schools	38
hospitals	8
militaries	4
others	2
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 2011, a total of 9 clusters of fever of unknown origin were reported. Clusters that were tested positive include 1 event of influenza A(H1N1)pdm09, 2 events of seasonal influenza virus type B, 3 events of adenovirus, 1 event of respiratory syncytial virus and 1 event of varicella. The rest of the reported event was tested negative. Schools had the highest incidence of fever of unknown origin clusters (5 events), followed by populous institutions (2 events), and the rest two events occurred in other places (including cruise and workplaces).

■ 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 2011.

■ Enterovirus clustering

1. Case definition: Suspected cluster events that occur in places such as nurseries and neonatal wards in hospitals, 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 2011, 1 enterovirus cluster was reported, which happened at an unregistered baby care center and was tested positive with enterovirus infection.

Real-time Outbreak and Disease Surveillance System

I. Purpose of surveillance

Through the “Real-time Outbreak and Disease Surveillance (RODS)” system, 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 to help early and rapid analysis of irregularities in the prevalence of diseases or syndromes.

The construction of the RODS system aims to detect early possible outbreak of communicable diseases in the communities, and track the trends and predict the prevalence of diseases. The reportable diseases under RODS included influenza-like illness, enterovirus infection and acute diarrhea in 2007. The reportable diseases in 2008 through 2011 include the routine surveillance of acute hemorrhagic conjunctivitis in addition to the reportable items in 2007.

II. Data analysis methods

More than 170 responsibility hospitals in Taiwan provide daily real-time information of emergency patients via the Internet directly. The format of the report contains the fields of patient's basic data, ID of reporting hospital, time of admission, chief complaint, and ICD-9-CM medical diagnosis code. Taiwan CDC compiles and analyzes RODS data weekly, determines the trends in the prevalence of diseases, makes statistical charts and posts them on Taiwan CDC's website.

III. Findings

■ Enterovirus

Epidemic analysis:

Enterovirus infections are generally most prevalent between April and October each year in Taiwan. The epidemic condition was milder in 2011 in comparison with previous years with a spike in the incidence of enterovirus infection in August. Based on the 2011 emergency enterovirus infection surveillance data, the emergency visit rate of enterovirus infections throughout the year ranged from 0.07‰ to 9.21‰, which was lower than 2010 (0.59‰ to 23.39‰). The epidemic condition picked up starting in May and peaked in early August. Different from the experiences in previous years, the visit rate of enterovirus infections showed a brief reversal and turned higher in November, while the declining trend in December was also slower than that over the same period in 2010. 【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 2011, the emergency room visit rate for influenza-like illness ranged from 8.03% to 30.43%. The overall prevalence in 2011 showed an uptrend in comparison with the surveillance figures in 2010 (8.06% to 17.08%) and exhibited an apparent peak. Based on the 7-day moving average chart of influenza-like illness visit rate, the emergency room visits rose sharply starting in January and reached a peak in early February. That was because hospitals and clinics closed their outpatient services in early February during the Chinese New Year holiday that led to sharp increase in emergency room visits. The emergency room visit rates went back to normal after the Chinese New Year holiday and the epidemic condition also slowed down gradually before it picked up again in December as another influenza season began. 【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 2011, the emergency room visit rate for acute diarrhea ranged from 2.59% to 11.02%. The overall prevalence in 2011 edged down slightly in comparison with the surveillance figures in 2010 (case rate ranging between 2.98% and 11.94%). Diarrhea epidemic typically reaches the peak of prevalence before and after the Chinese New Year. Based on the 7-day moving average chart of acute diarrhea visit rate, the emergency room visits rose gradually starting December 2010 and peaked in early February during the Chinese New Year holiday when most hospitals and clinics closed their outpatient service. The emergency room visit rate declined gradually afterwards, but showed two peaks in early April and mid-September later. The overall epidemic condition of acute diarrhea in 2011 was similar to that in 2010, only there was no rising trend in December 2011 as compared to 2010 when the rising trend started in mid-November. 【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 (AHC)

Epidemic analysis:

In 2011, the emergency room visit rate for conjunctivitis ranged from 0.49‰ to 5.69‰, which was lower than that in 2010 (0.55‰ to 10.24‰). Based on the 7-day moving average chart of conjunctivitis visit rate, the emergency room visits showed a brief peak in early February during the Chinese New Year holiday when most hospitals and clinics closed their outpatient service. The conjunctivitis epidemic rose slightly in April and peaked in June, which was similar to the prevalence trend in 2010. 【Note: permillage of AHC visits = (person-time of emergency room AHC cases / total person-time of emergency room cases) *1000‰】

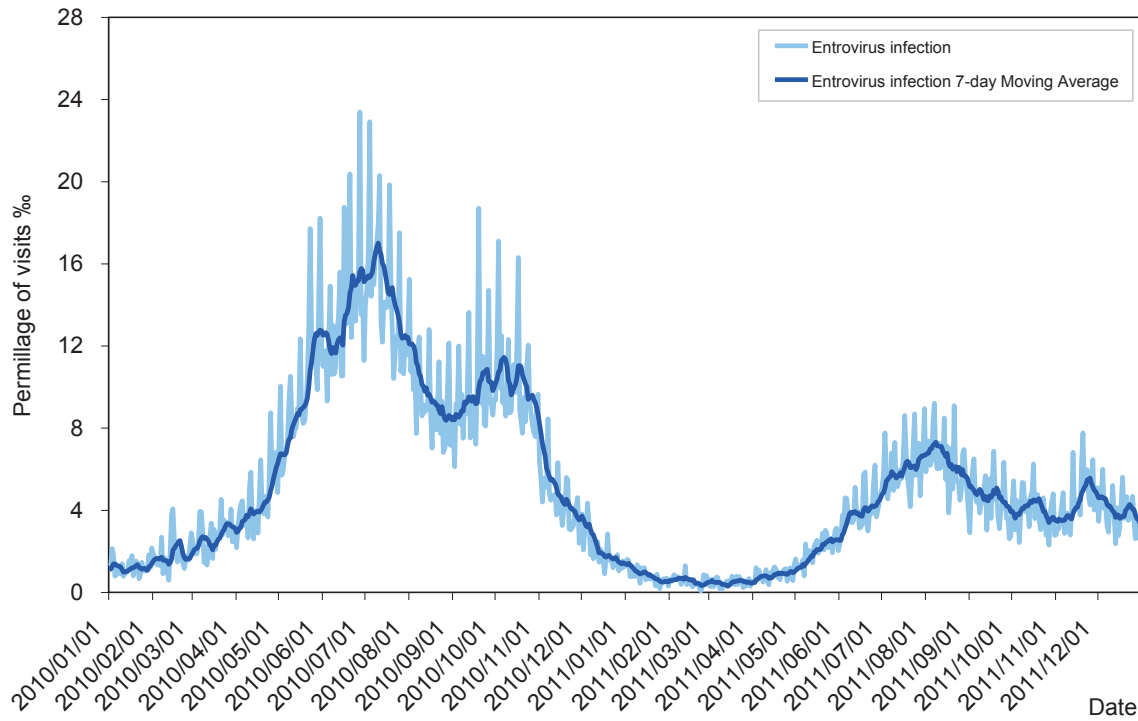


Figure 19 Daily Percentage of Emergency Department of Enterovirus Visits & 7-day Moving Average

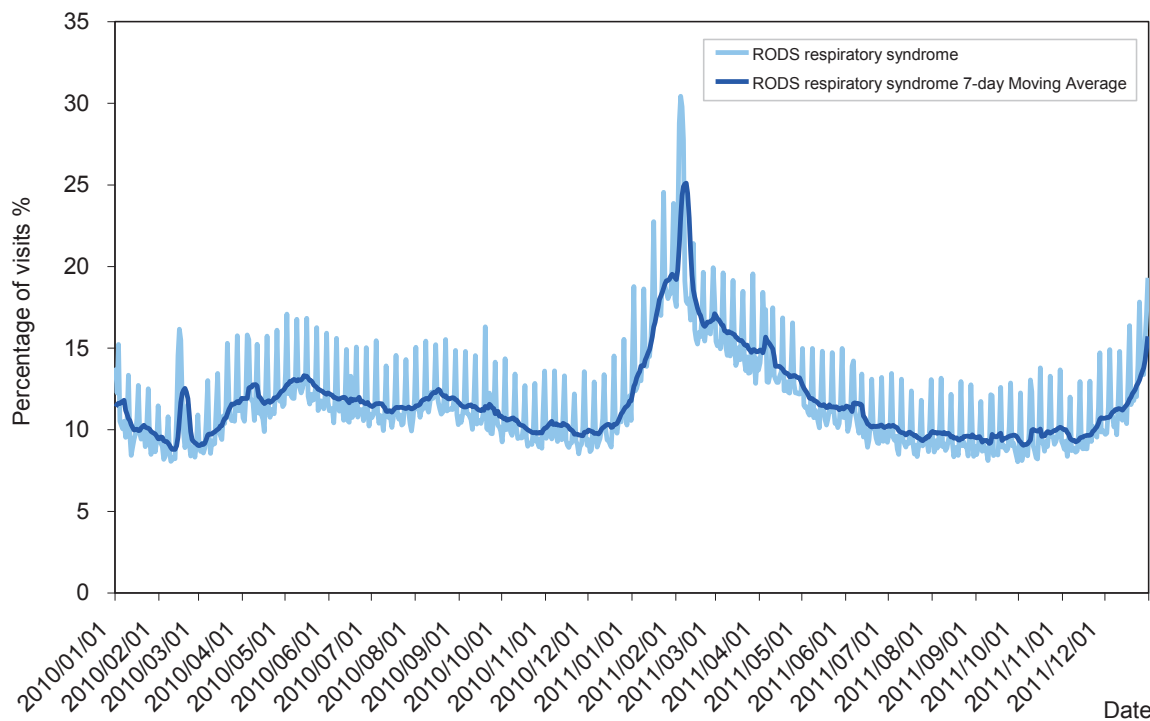


Figure 20 Daily Percentage of Emergency Department of Respiratory Visits & 7-day Moving Average

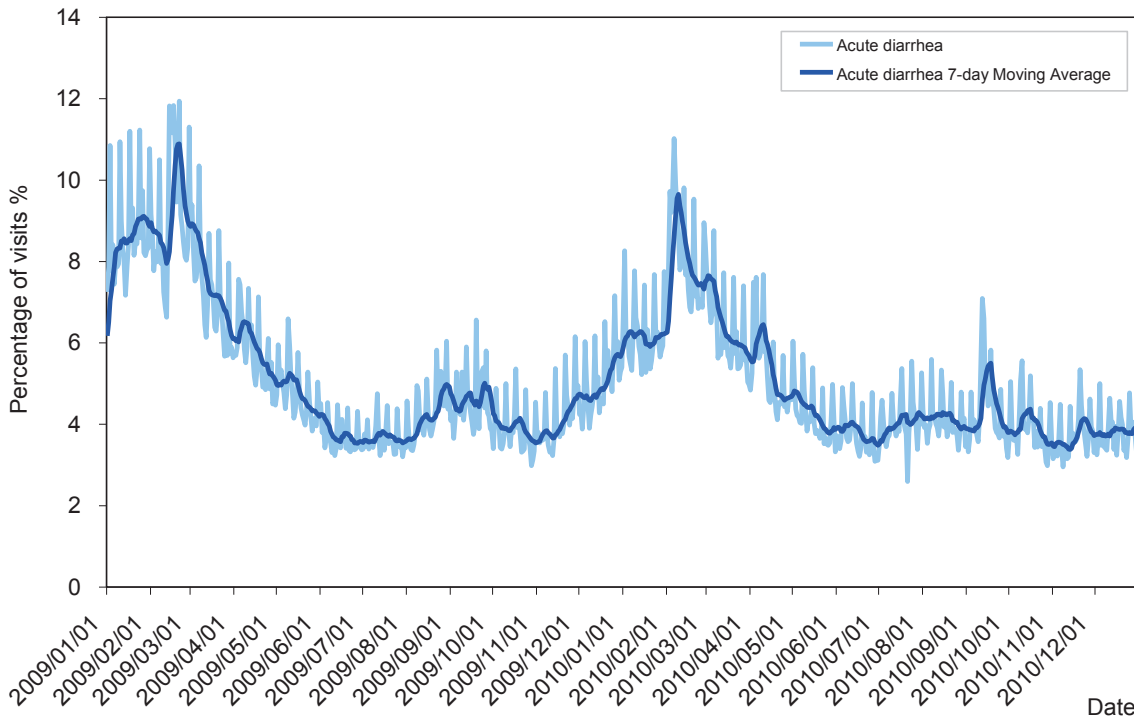


Fig 21 Daily Percentage of Emergency Department of Acute Diarrhea Visits & 7-day Moving Average

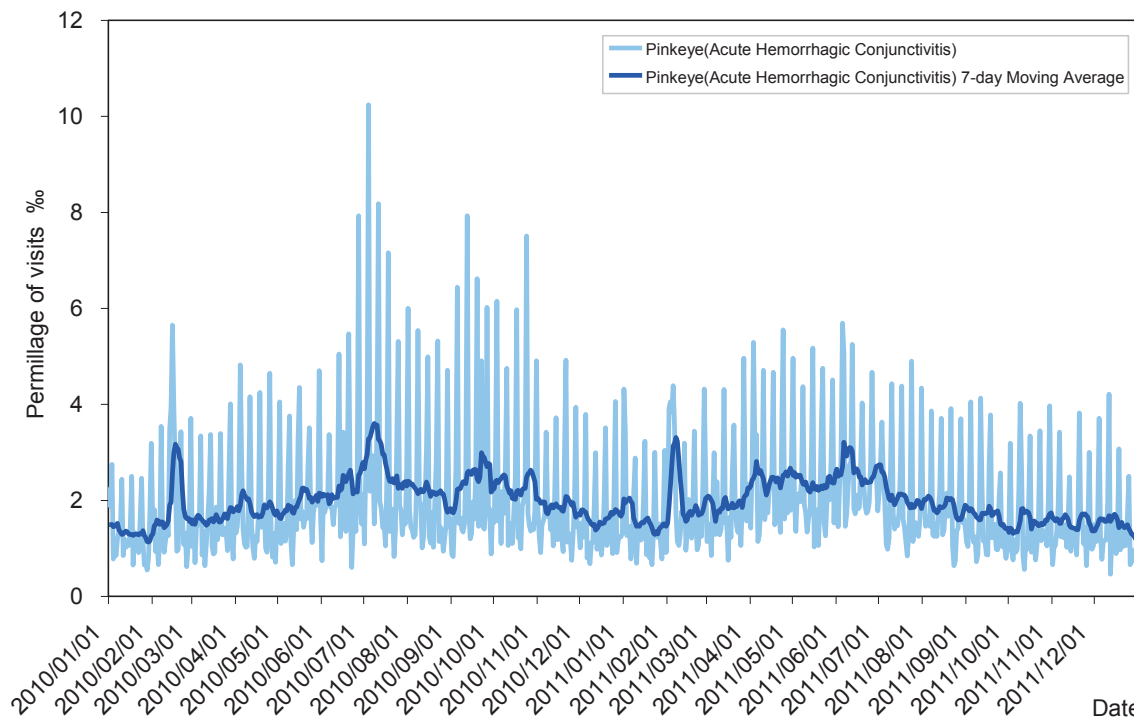


Fig 22 Daily Percentage of Emergency Department of Acute Hemorrhagic Conjunctivitis Visits & 7-day Moving Average

Disease Surveillance using National Health Insurance Data

I. Introduction

To boost 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 the comprehensive and highly representative secondary statistical data compiled by BNHI to assess the magnitude of an epidemic condition.

II. Purpose of surveillance

The NHI data routine surveillance monitors diseases that are commonly seen in Taiwan every year, 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 (RODS)" system, construct and play the role of "mild symptoms surveillance" of influenza-like illness and enterovirus infection to carry out full assessment of epidemics and grasp the trends of prevalence.

III. Data analysis method

From the surveillance data received daily, Taiwan CDC fetches representative ICD-9-CM (International Classification of Diseases, Clinical Modification, Ninth Revision) coded diagnostic data, include secondary data as admission date, hospital locations, age groups, codes of outpatient/inpatient/emergency department and so on. Due to the bigger fluctuation seen in daily inpatient/outpatient visit data following analysis, 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)

In 2011, between 50 and 30,000 person-times visited the hospitals for influenza-like illness on an outpatient basis every day, which represented an increase in comparison with the number of outpatient visits (ranging between 300 and 15,000 person-times a day) in 2010. Observing the trends in epidemic prevalence based on the 7-day moving average curve of outpatient visits due to influenza-like illness, the overall epidemic condition of influenza-like illness had a peak at the end of January 2011. But the outpatient visits dropped sharply in early February during the Chinese New Year holiday during which hospitals and clinics were closed. The outpatient visits peaked again after the Chinese New Year holiday, but the epidemic condition slowed down gradually. In comparison with 2010, the influenza epidemic was significantly more widespread and the number of outpatient visits rose sharply in December 2011, signifying an earlier start of the flu season in 2011-2012 than in 2010-2011.

■ Enterovirus infections

In 2011, between 10 and 3,300 person-times visited the hospitals for enterovirus infection on an outpatient basis every day, which dropped significantly in comparison with the number of outpatient visits (ranging between 40 and 8,000 person-times a day) in 2010. Observing the trends in epidemic prevalence based on the 7-day moving average curve of outpatient visits due to enterovirus infection, it is found the epidemic condition in 2011 was milder than 2010 as the incidence of enterovirus infection in 2011 went up gradually in May and started later than in 2010 (March). There was no significant peak in 2011, and the highest number of outpatient visits was recorded in August. Different from previous years, the prevalence trend of enterovirus infections showed a reversal and turned higher in November, while the declining trend in December was not apparent.

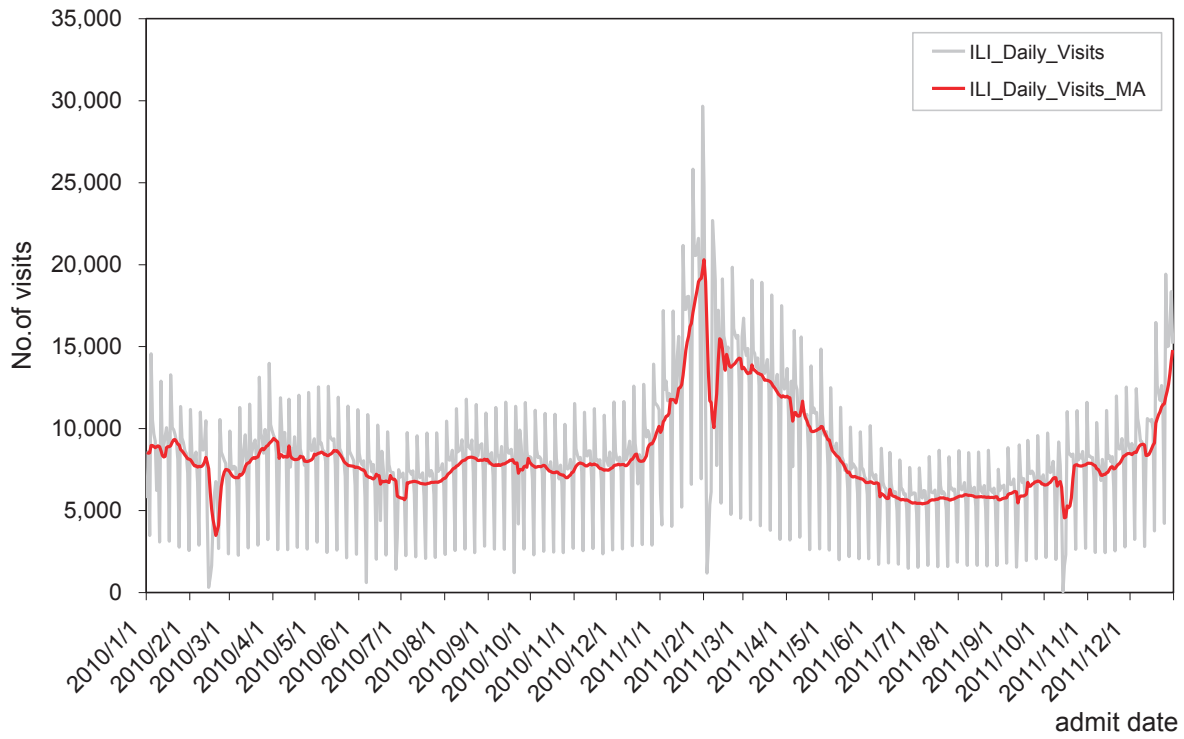


Figure 23 Daily influenza-like illness visits and the 7-day moving average trend (January 1~December 31, 2011)

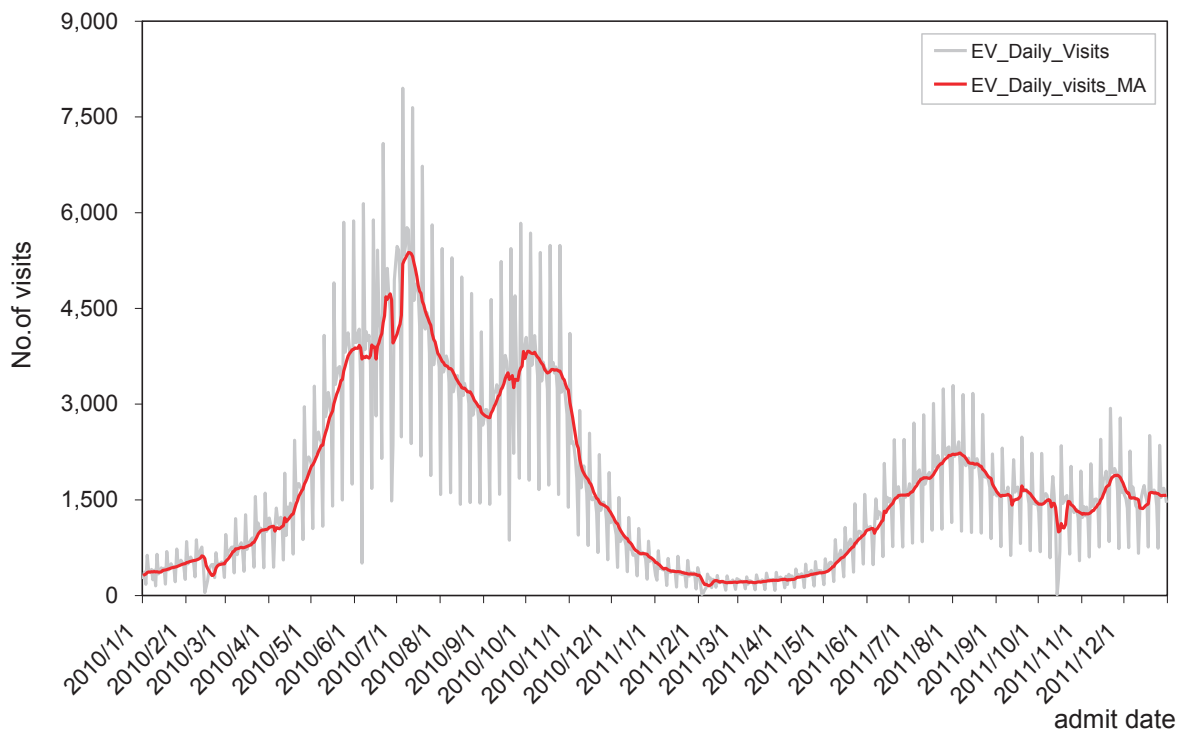


Figure 24 Daily enterovirus visits and the 7-day moving average trend (January 1~December 31, 2011)

Pneumonia and Influenza Mortality Surveillance

I. Introduction

Many parts of the world reported the outbreak of 2009 pandemic influenza A (H1N1) epidemics starting April 2009. Soon after the World Health Organization (WHO) announced the case definition of H1N1 influenza on April 26, 2009, Taiwan categorized H1N1 influenza as a Class 1 notifiable communicable disease on April 27 for epidemic surveillance purpose. Subsequently because the majority of H1N1 influenza cases had only mild symptoms, the WHO branded the flu outbreak as a “gentle pandemic”. Thus Taiwan removed H1N1 influenza from Class 1 notifiable communicable diseases on June 19, 2009. From then on, cases of 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 viral surveillance, outpatient illness 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 under the age of 18 to achieve the purpose of fast tracking.

Under the belief and guidance of real-time surveillance and early warning of communicable diseases and in consideration of rapid response to the H1N1 pandemic in 2009, Taiwan CDC embarks on inter-agency collaboration with the Office of Statistics, Department of Health (DOH). Taiwan CDC receives daily death certification data reported by hospitals and clinics electronically from the Office of Statistics, DOH, and subsequently analyzes cases where the reported cause of death is pneumonia or influenza (P&I) to carry out P&I mortality surveillance and readily grasp the related mortality trends.

II. Purpose of surveillance

Pneumonia is a common complication of influenza infection. The great majority of influenza mortality is caused by persistent bacterial pneumonia 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 H1N1 epidemic in 2009 buttresses Taiwan CDC’s influenza prevention and control network together with the operating “Real-Time Outbreak and Disease Surveillance (RODS) System”, “Disease surveillance using National Health Insurance data”, “Contracted Laboratory Surveillance System”, and “Hospitalization Surveillance” to cover

surveillance in four dimensions (mortality, mild symptoms, virus and hospitalization). It is hoped 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 and effects of real-time control and early warning.

III. Data analysis method

Taiwan CDC conducts weekly surveillance of the trends in 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 and 430 in 2011. In observation of the 4-week moving average of P&I death prevalence curve, it is found that the overall mortality of P&I death in 2011 started to rise at the end of 2010, peaked on the 8th week of the year, and then leveled off thereafter. The weekly deaths from P&I in 2010 ranged between 200 and 310, and the overall death trends for the year were relatively mild without apparent peaks of prevalence. If analyzed by age group, the highest P&I death rate in 2011 occurred in 65 years and over age group, accounting for 87.3% of the surveillance data. The phenomenon was the same in 2010, during which the highest P&I death rate occurred in 65 years and over age group, which accounted for 86.9% of total P&I deaths in the year, similar to that in 2011.

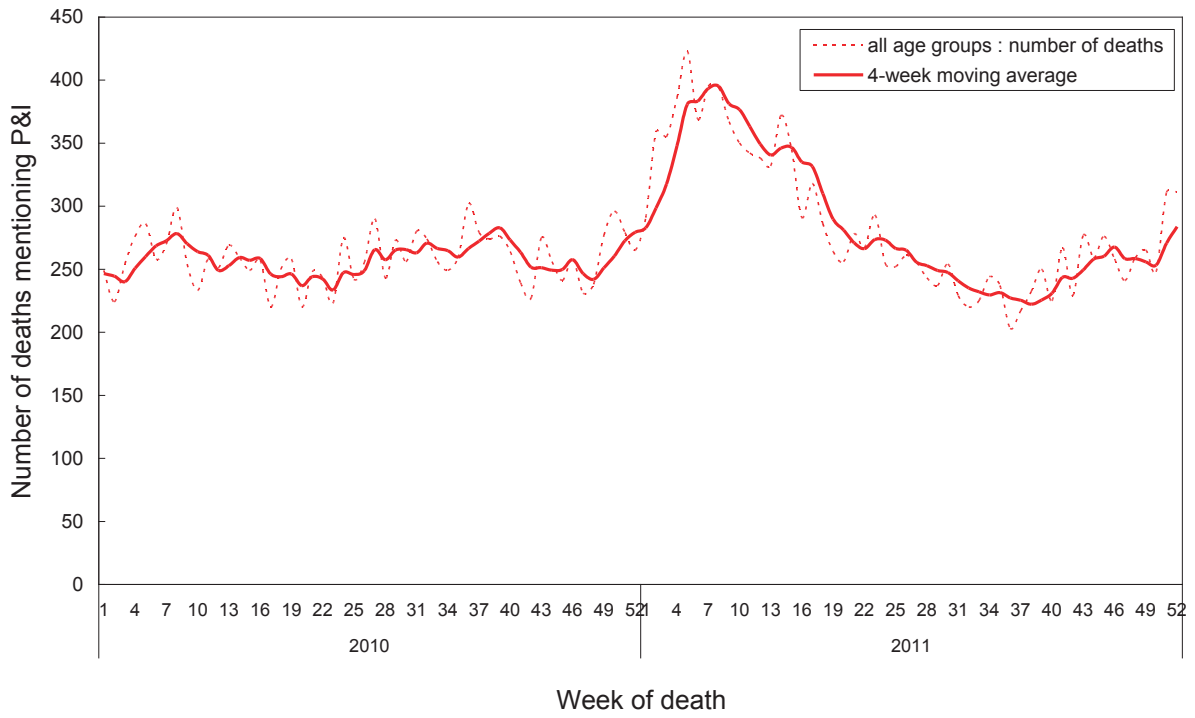


Figure 25 The surveillance trend of pneumonia and influenza mortality



Surveillance Reports of Selected Diseases

©Abbreviations and Symbols Used in Table

- No reported cases.
- ... Not under surveillance.

Measles

In 2011, 33 cases of measles (incidence rate: 0.14 per 100,000 population) were confirmed, which showed an increase when compared with 12 confirmed cases (incidence rate: 0.05 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 24 male cases (72.7%) and 9 female cases (27.3%) with male to female ratio of 2.7:1.0.

(2) By age group

There were 18 cases in 15-24 years age group, 8 cases in 25-39 years age group, 4 cases in 0-1 year age group, 2 cases in 5-14 years age group, and 1 case in 1-4 years age group.

Of the 4 cases in 0-1 year age group, 2 cases were 11 months old, 1 case was 4 months old and 1 case was 9 months old.

(3) By month

There were 11 cases in April, 10 cases in March, 5 cases in June, 4 cases in May, 2 cases in February and 1 case in January.

(4) By residential region

Lienchiang County had the highest number of incidents (17 cases), followed by Taipei City with 4 cases, New Taipei City, Taoyuan County and Taichung City each with 3 cases, Yunlin County with 2 cases and Pingtung County with 1 case. The other cities and counties had no confirmed cases.

The incidence rate of measles was the highest in Lienchiang County (169.56 per 100,000 population), followed by Yunlin County (0.28 per 100,000 population), Taipei City and Taoyuan County (both at 0.15 per 100,000 population).

(5) Imported cases and countries of infection

There were 4 imported cases of measles in 2011, including 2 cases from Italy, 1 case from France and 1 case whose country of origin could not be specifically identified following epidemiological investigation.

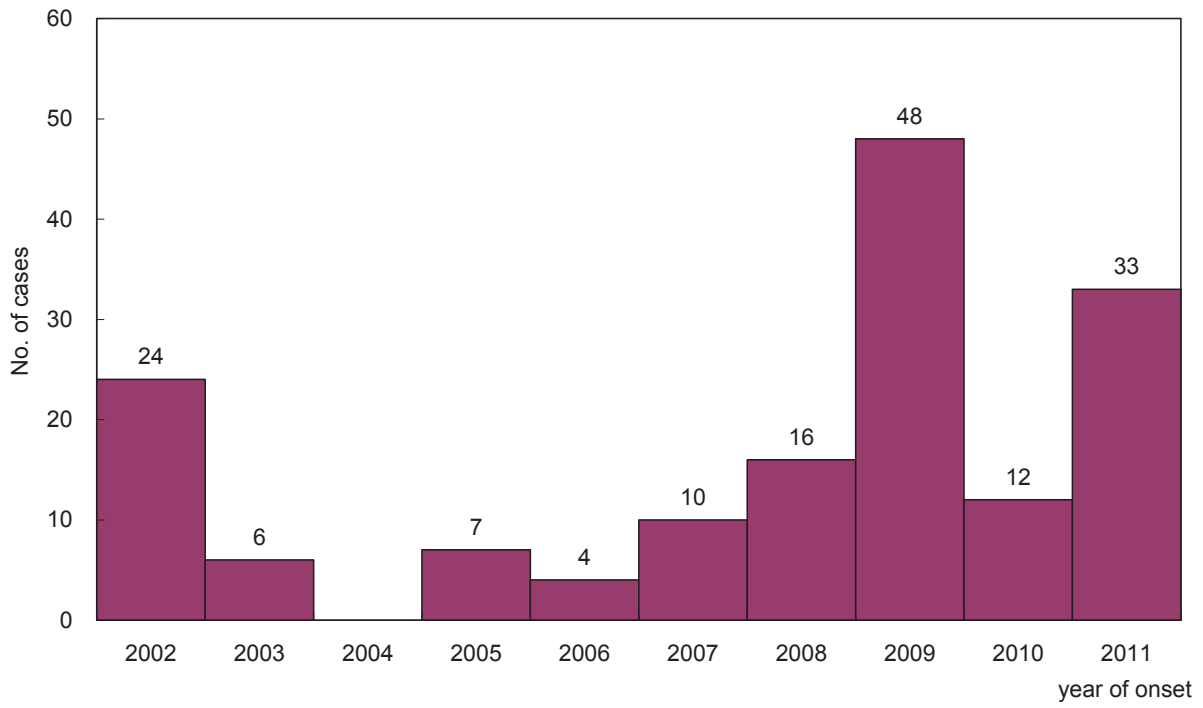


Figure 26 Number of Measles confirmed cases, 2002-2011

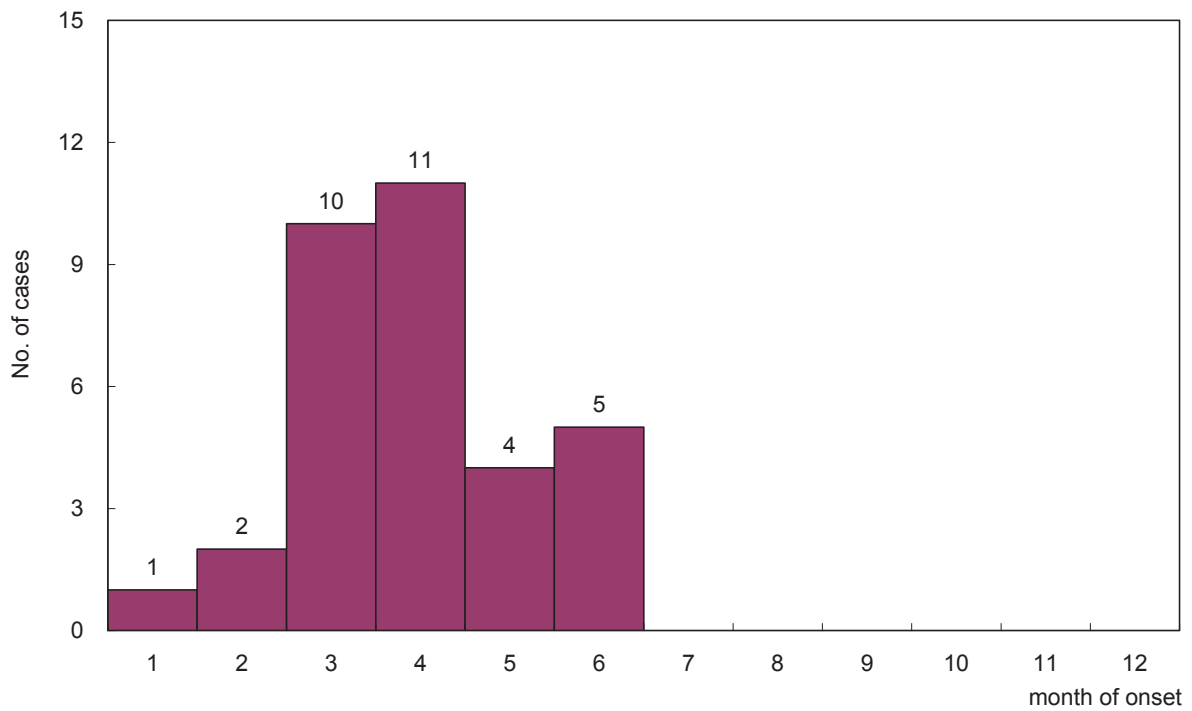


Figure 27 Number of Measles confirmed cases, 2011

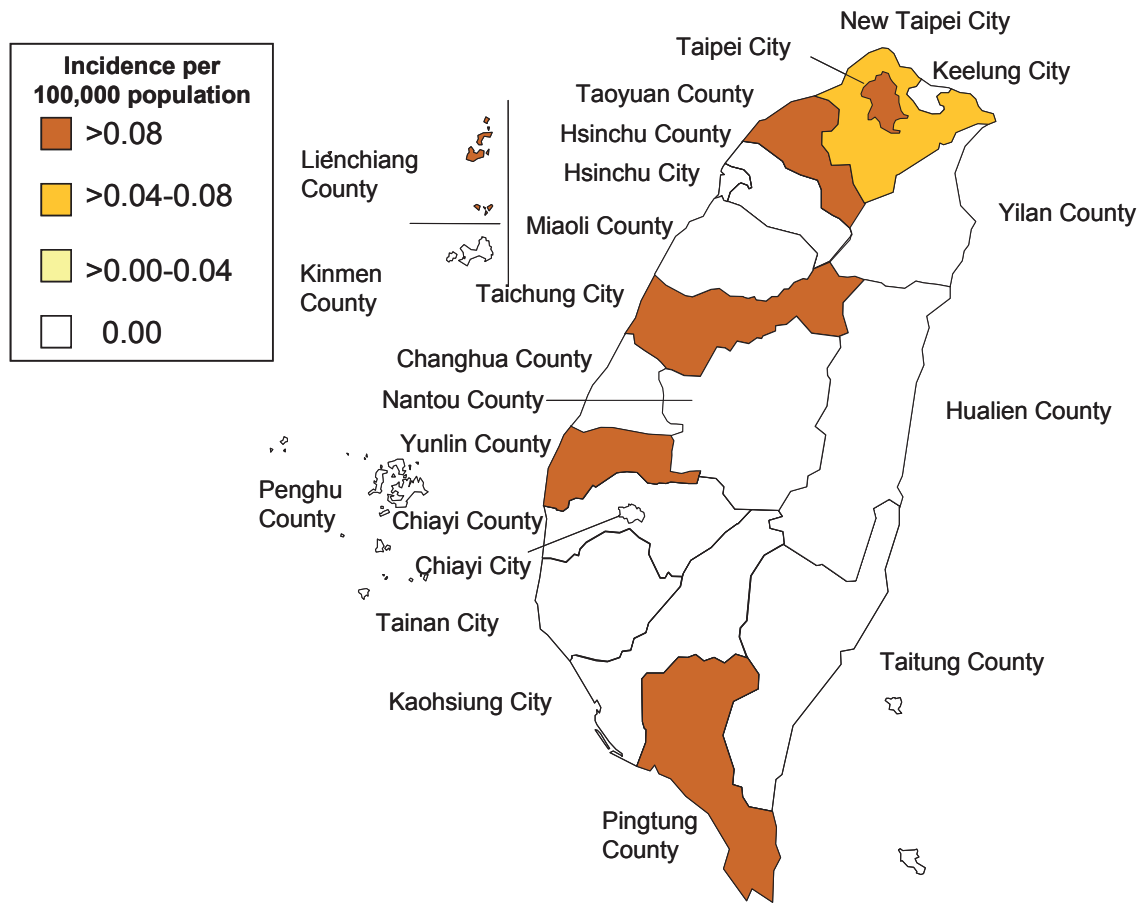


Figure 28 Geographical distribution by incidence of Measles confirmed cases, 2011

Pertussis

In 2011, 77 cases of pertussis (incidence rate: 0.33 per 100,000 population) were confirmed, which showed an increase when compared with 61 confirmed cases (incidence rate: 0.26 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 40 male cases (51.9%) and 37 female cases (48.1%) with male to female ratio of 1.1:1.0.

(2) By age group

There were 35 cases in 0-1 year age group, 21 cases in 5-14 years age group, 12 cases in 25-39 years age group, 5 cases in 40-64 years age group, 3 cases in 15-24 years age group, and 1 case in 1-4 years age group.

Of the 35 cases in 0-1 year age group, 12 cases were 2 months old, 11 cases were 1 month old, 4 cases were 4 months old, 3 cases each were 3 months old and 5 months old, and 2 cases were less than 1 month old.

(3) By month

There were 20 cases in September, 13 cases in August, 7 cases each in March and May, 6 cases in February, 5 cases each in June and November, 4 cases each in January and April, 3 cases in December, 2 cases in October, and 1 case in July.

(4) By residential region

New Taipei City had the highest number of incidents (20 cases), followed by Taipei City with 15 cases, Taoyuan County with 14 cases, Kaohsiung City with 6 cases, Changhua County and Yilan County with 5 cases each, Keelung City, Yunlin County, Chiayi City, and Pingtung County with 2 cases each, and Hsinchu City, Taichung City, Tainan City and Taitung County with 1 case each. The other cities and counties had no confirmed cases.

The incidence rate of pertussis was the highest in Yilan County (1.09 per 100,000 population), followed by Chiayi City (0.74 per 100,000 population), and Taoyuan County (0.70 per 100,000 population).

(5) Imported cases and countries of infection

There were no imported cases of pertussis in 2011.

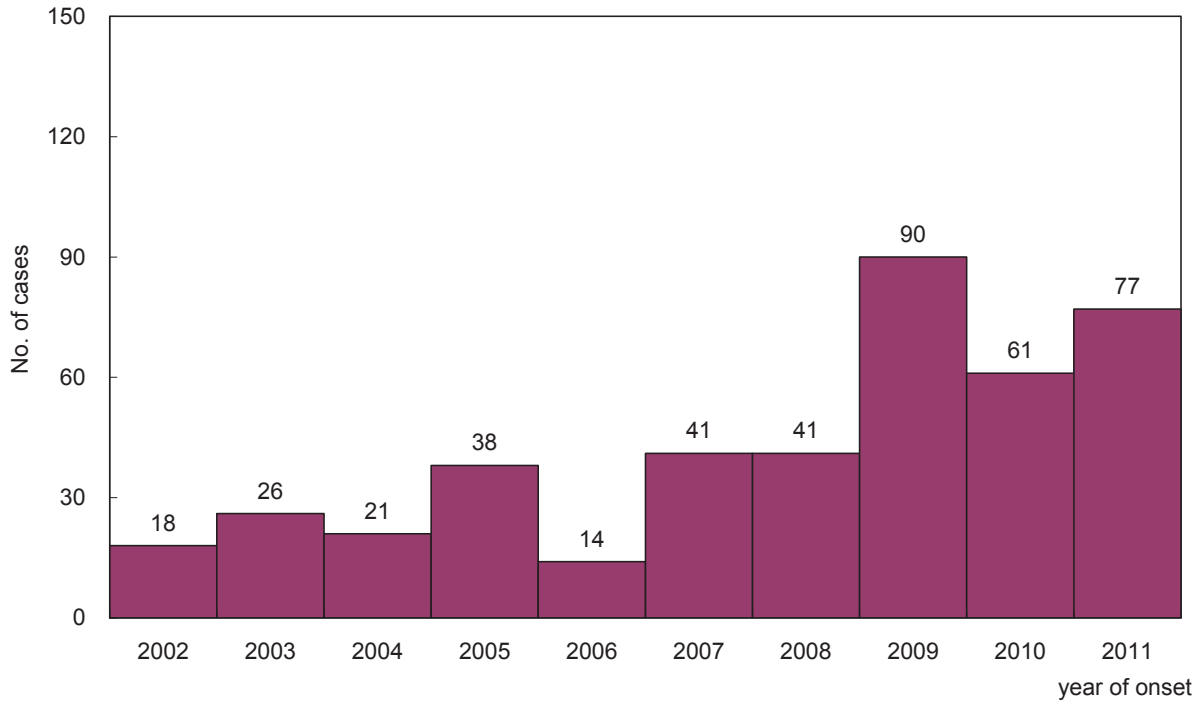


Figure 29 Number of Pertussis confirmed cases, 2002-2011

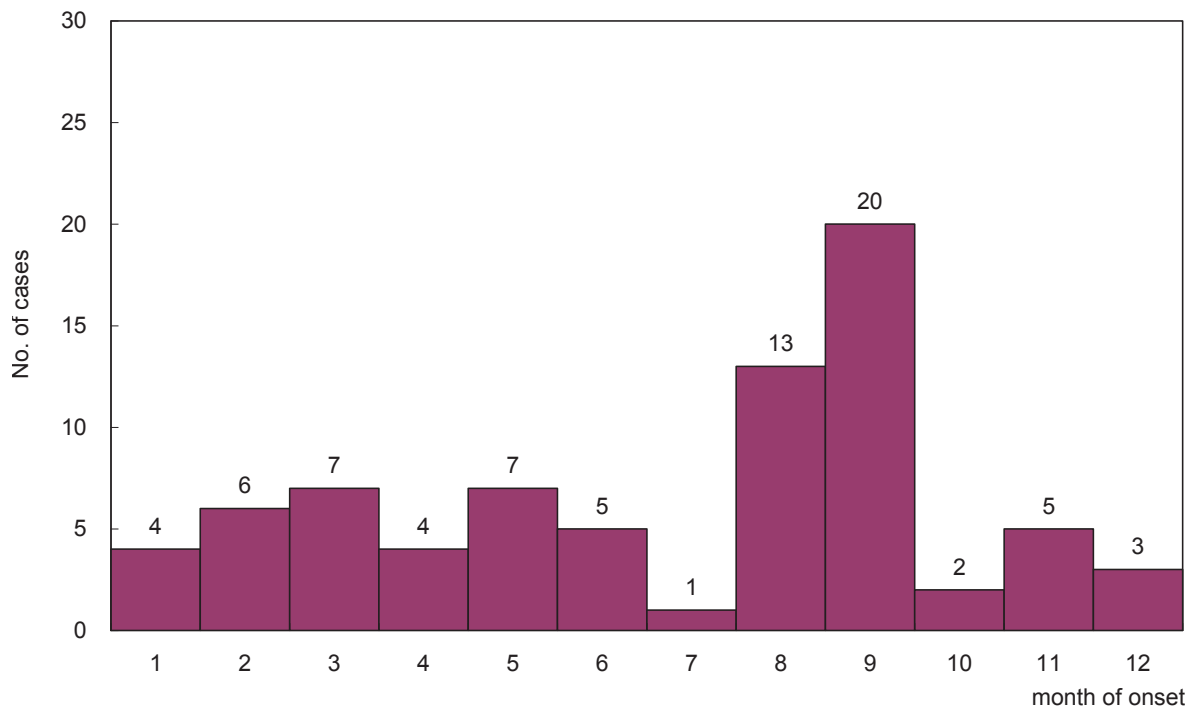


Figure 30 Number of Pertussis confirmed cases, 2011

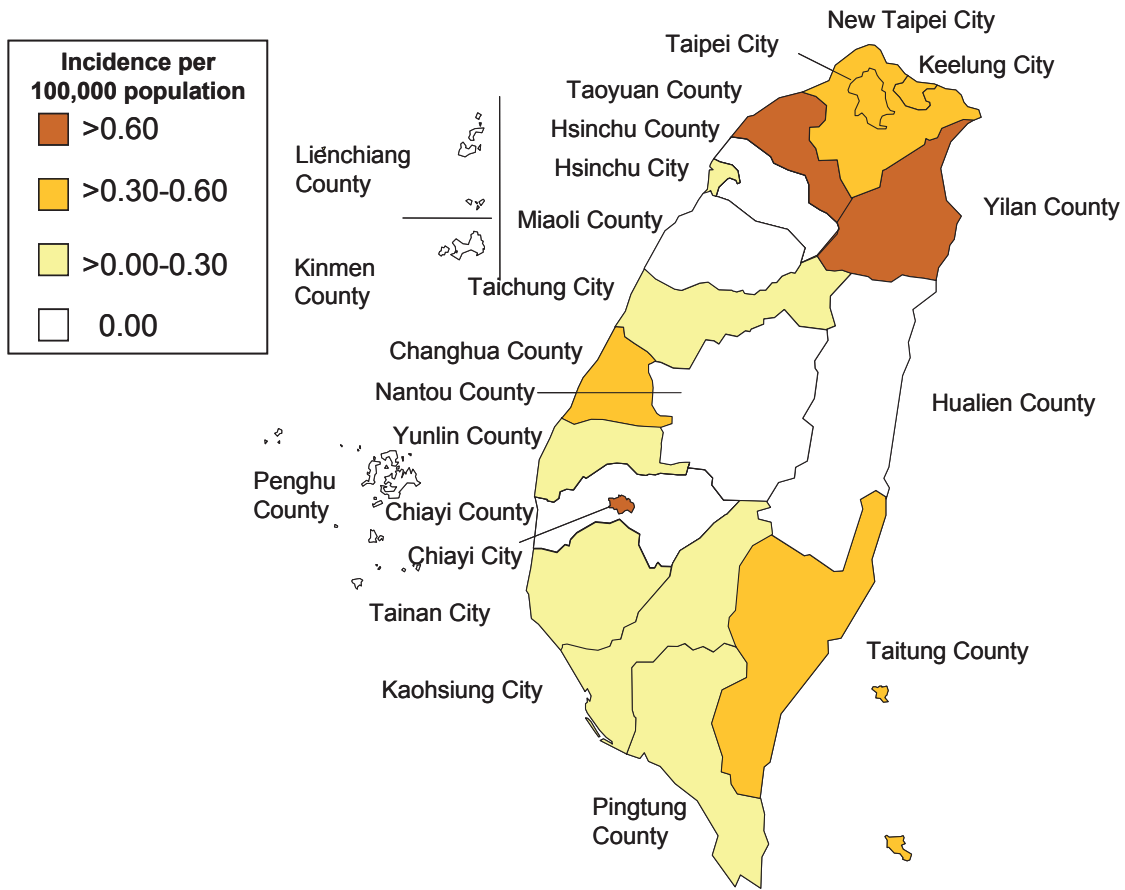


Figure 31 Geographical distribution by incidence of Pertussis confirmed cases, 2011

Meningococcal Meningitis

In 2011, 5 cases of meningococcal meningitis (incidence rate: 0.02 per 100,000 population) were confirmed, which showed a decline when compared with 7 confirmed cases (incidence rate: 0.03 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 3 male cases (60.0%) and 2 female cases (40.0%) with male to female ratio of 1.5:1.0.

(2) By age group

There were 2 cases in 65 years and over age group, and 1 case each in 0-1 (less than 1 month old), 5-14, and 40-64 years age groups.

(3) By month

There was 1 confirmed case each in January, April, June, July and November.

(4) By residential Region

Confirmed cases were occurring in 5 cities and counties. New Taipei City, Taichung City, Yunlin County, Tainan City, and Taitung County had 1 case each, whereas no cases were reported in other cities and counties.

The incidence rate of meningococcal meningitis was the highest in Taitung County (0.44 per 100,000 population), followed by Yunlin County (0.14 per 100,000 population), and Tainan City (0.05 per 100,000 population).

(5) Imported cases and countries of infection

There were no imported cases of meningococcal meningitis in 2011.

(6) By serogroup

According to the laboratory testing results, 4 cases were *Neisseria meningitidis* group B, and 1 case was *Neisseria meningitidis* group C.

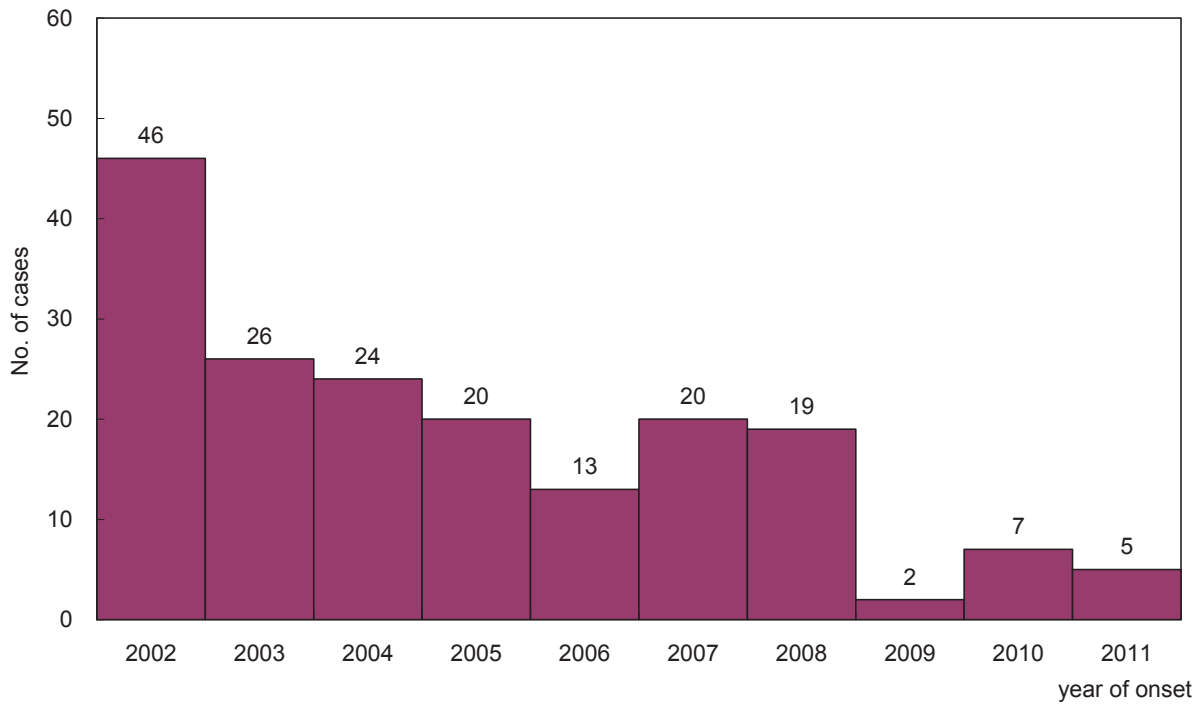


Figure 32 Number of Meningococcal Meningitis confirmed cases, 2002-2011

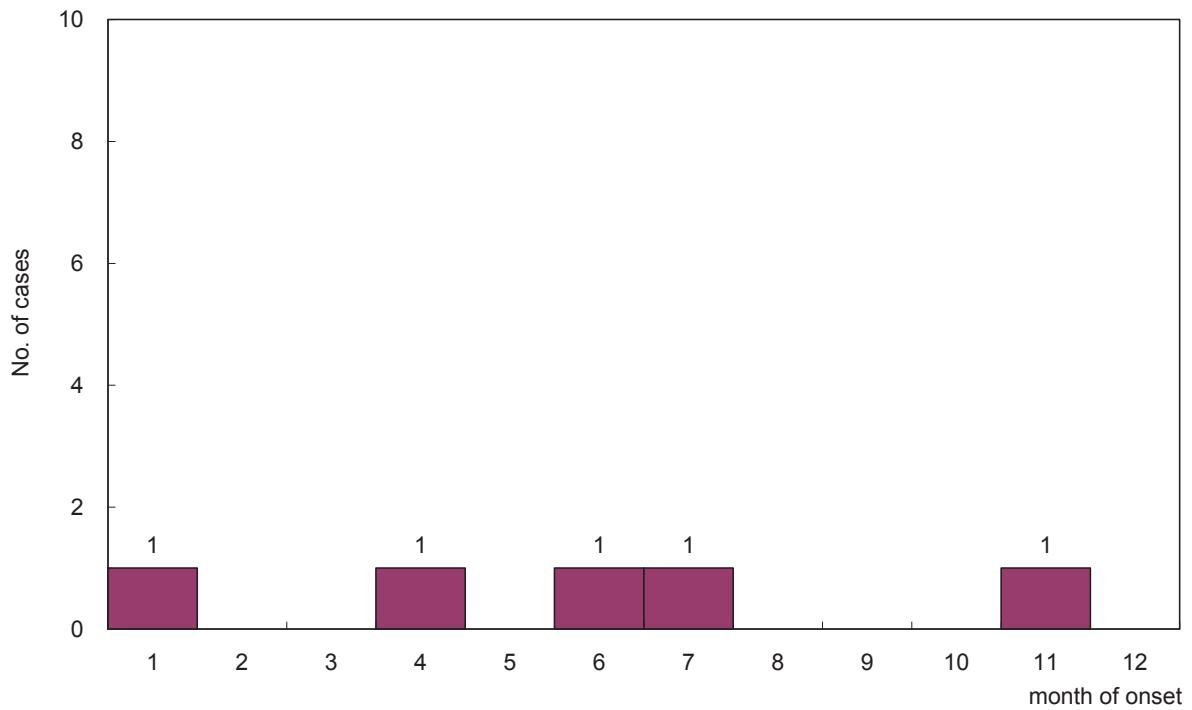


Figure 33 Number of Meningococcal Meningitis confirmed cases, 2011

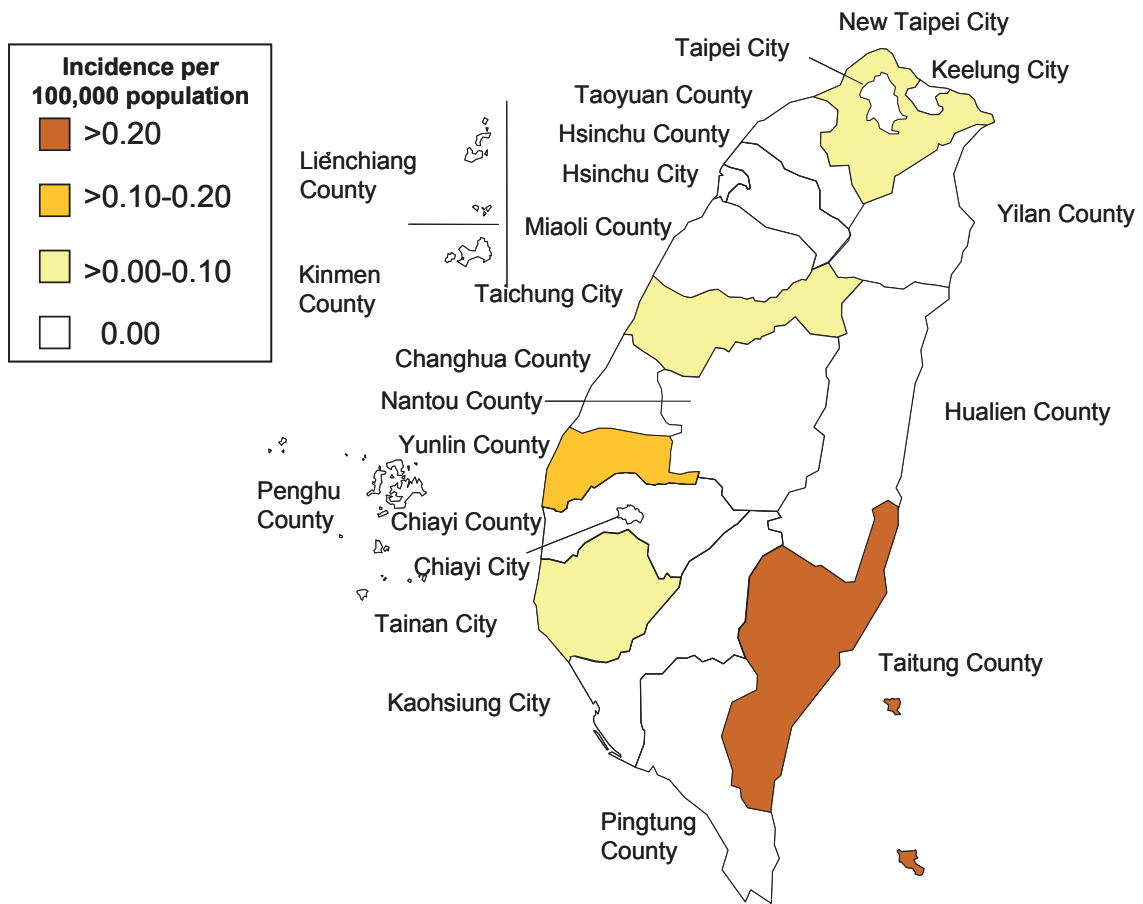


Figure 34 Geographical distribution by incidence of Meningococcal Meningitis confirmed cases, 2011

Japanese Encephalitis

In 2011, 22 cases of Japanese encephalitis (incidence rate: 0.09 per 100,000 population) were confirmed, which showed a decline when compared with 33 confirmed cases (incidence rate: 0.14 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 14 male cases (63.6%) and 8 female cases (36.4%) with male to female ratio of 1.8:1.0.

(2) By age group

There were 11 cases in 40-64 years age group, 8 cases in 25-39 years age group, 2 cases in 65 years and over age group, and 1 case in 1-4 years age group.

(3) By month

The cases occurred mostly in warm seasons, with 13 cases in July, 4 cases in August, 3 cases in June and 2 cases in September.

(4) By residential Region

New Taipei City had the highest number of incidents with 5 cases, followed by Hualien County with 4 cases, Nantou County with 3 cases, Kaohsiung City with 2 cases, and Taoyuan County, Hsinchu City, Hsinchu County, Miaoli County, Taichung City, Changhua County, Tainan City and Pingtung County each with 1 case, whereas no confirmed cases were occurring in the other cities and counties.

The incidence rate of Japanese encephalitis was the highest in Hualien County (1.18 per 100,000 population), followed by Nantou County (0.57 per 100,000 population), and Hsinchu City (0.24 per 100,000 population).

(5) Imported cases and countries of infection

There were no imported cases of Japanese encephalitis in 2011.

(6) By clinical symptoms

Among these confirmed cases, 18 cases had fever, 13 cases had headache, 11 cases had unconsciousness, 7 cases were comatose, 6 cases had neck stiffness, 4 cases had nausea or vomiting, 3 cases had speaking difficulty, and each one case had encephalitis or paralysis.

(7) Dwelling or neighborhood environment

Among these confirmed cases, 10 cases lived nearby pig farms, 9 cases lived nearby paddy fields, 6 cases lived nearby duck, poultry or goose farms, 5 cases had pets at home, 3 cases lived nearby dry farmlands, 3 cases lived nearby fruit farms, 2 cases lived nearby pigeon farms, and 1 case lived nearby ponds.

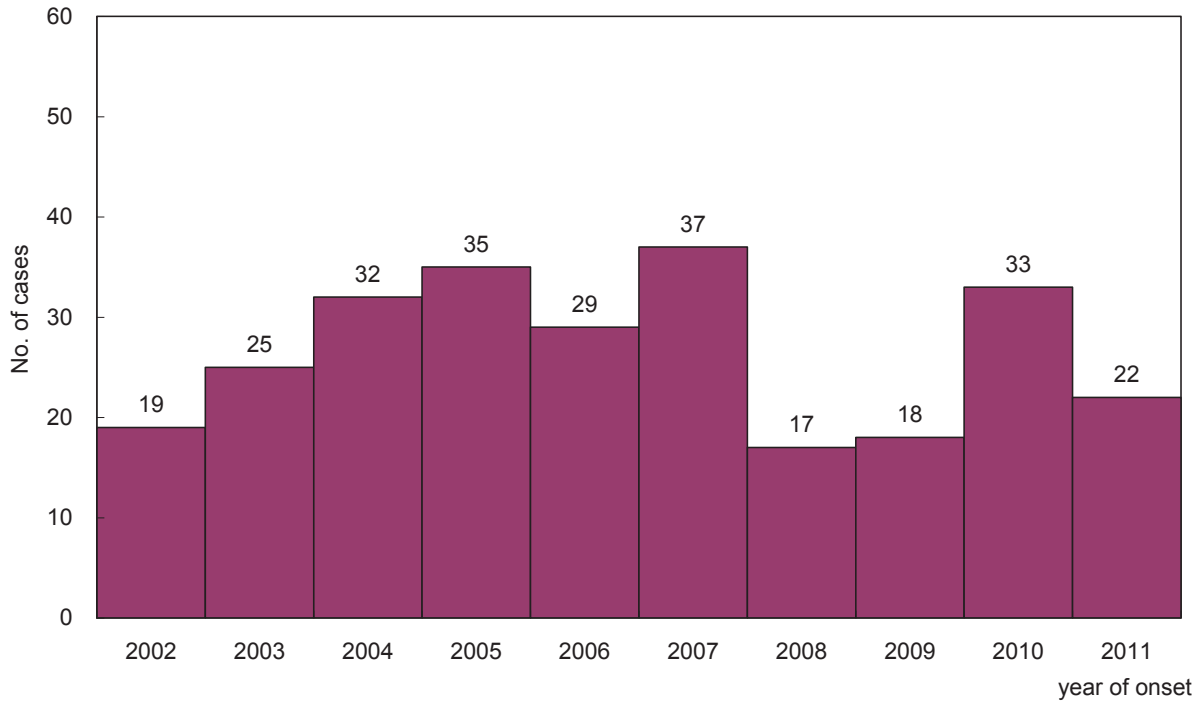


Figure 35 Number of Japanese Encephalitis confirmed cases, 2002-2011

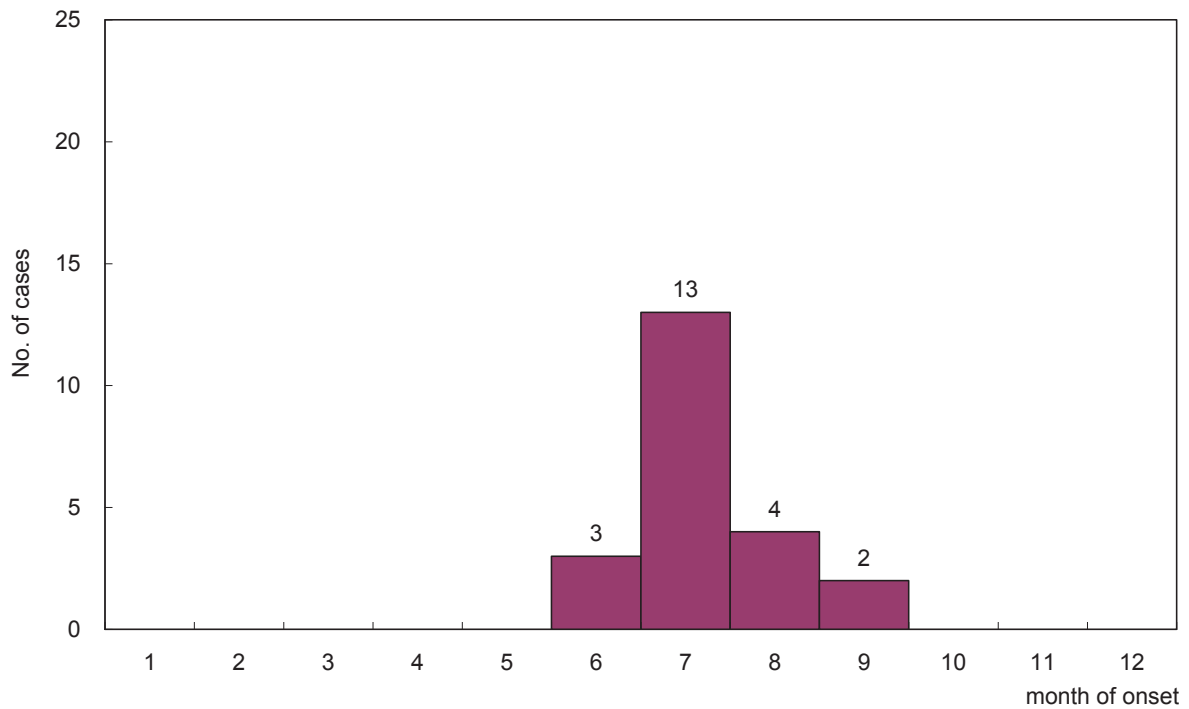


Figure 36 Number of Japanese Encephalitis confirmed cases, 2011

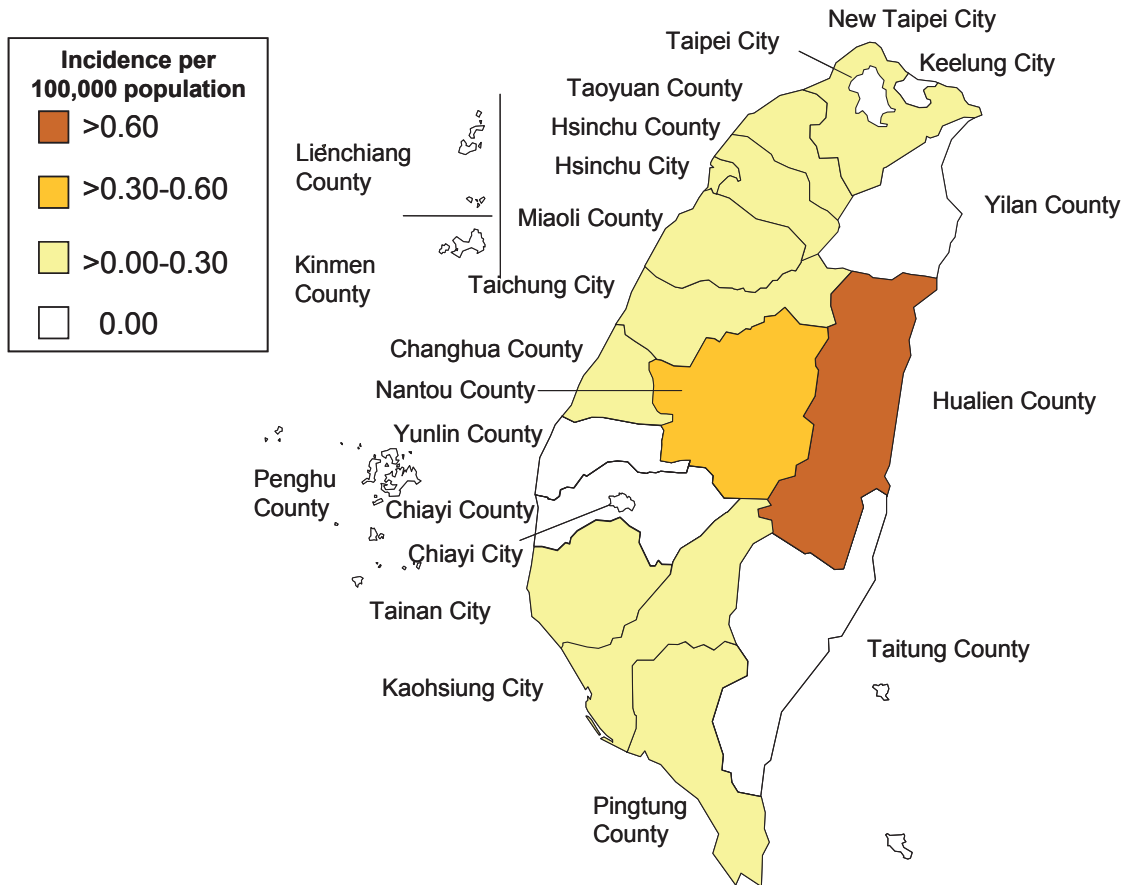


Figure 37 Geographical distribution by incidence of Japanese Encephalitis confirmed cases, 2011

Acute Hepatitis A

In 2011, 104 cases of acute hepatitis A (incidence rate: 0.45 per 100,000 population) were confirmed, which showed a decline when compared with 110 confirmed cases (incidence rate: 0.48 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 69 male cases (66.3%) and 35 female cases (33.7%) with male to female ratio of 2.0:1.0.

(2) By age group

There were 40 cases in 25-39 years age group, 32 cases in 40-64 years age group, 14 cases in 15-24 years age group, 12 cases in 65 years and over age group, and 6 cases in 5-14 years age group.

(3) By month

June had the highest number of incidents with 17 cases, followed by 16 cases in March, 11 cases in May, 10 cases in November, 9 cases in February, 8 cases in July, 7 cases each in January and April, 6 cases each in September and October, 4 cases in December, and 3 cases in August.

(4) By residential region

New Taipei City had the highest number of incidents with 19 cases, followed by Taichung City with 15 cases, Taipei City and Kaohsiung City each with 12 cases, Taoyuan County with 10 cases, Changhua County with 7 cases, Keelung City, Miaoli County and Hualien County each with 5 cases. The other cities and counties all had less than 5 cases, in which Yunlin County, Yilan County, Taitung County, Penghu County, Kinmen County and Lienchiang County had no confirmed cases.

The incidence rate of acute hepatitis A was the highest in Hualien County (1.48 per 100,000 population), followed by Keelung City (1.31 per 100,000 population), and Miaoli County (0.89 per 100,000 population).

(5) Imported cases and countries of infection

There were 20 imported cases of acute hepatitis A in 2011, including 5 cases from Philippines, 3 cases each from Malaysia and India, 2 cases each from China and Thailand, 1 case each from Indonesia, Cambodia, USA, and Australia, and 1 case whose country of origin could not be specifically identified following epidemiological investigation.

(6) Clinical symptoms

An epidemiological survey of 104 confirmed cases showed: in cases with symptoms (multiple answers are allowed), 73.1% (76 person-times) had tiredness, 67.3% (70 person-times) had

tawny urine and yellowing of the white of the eye or skin respective, 63.5% (66 person-times) had stomach discomfort, 57.7% (60 person-times) had nausea, 56.7% (59 person-times) had vomiting, and 55.8% (58 person-times) had fever.

(7) Source of drinking water and dietary habits

The epidemiological survey of 104 confirmed cases showed that the major sources of residential drinking water (multiple answers are allowed) are tap water which accounted for 76.9% (80 person-times), packaged water which accounted for 9.6% (10 person-times); in addition, spring water accounted for 4.8% (5 person-times), and groundwater accounted for 3.8% (4 person-times). As for dietary habits (multiple answers allowed), taking food at snack booths accounted for the largest percentage, accounting for 39.4% (41 person-times), followed by dinner party in restaurants accounting for 32.7% (34 person-times), and taking nutritional lunch or take-out lunch box accounting for 25% (26 person-times).

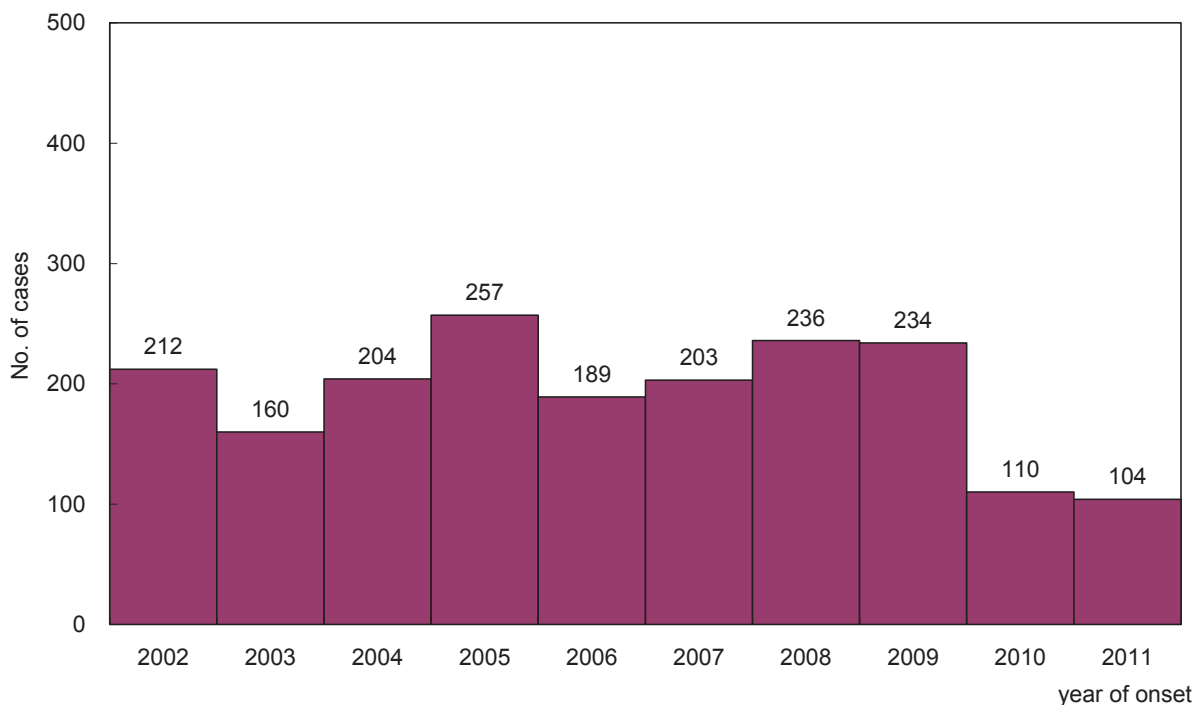


Figure 38 Number of Acute Hepatitis A confirmed cases, 2002-2011

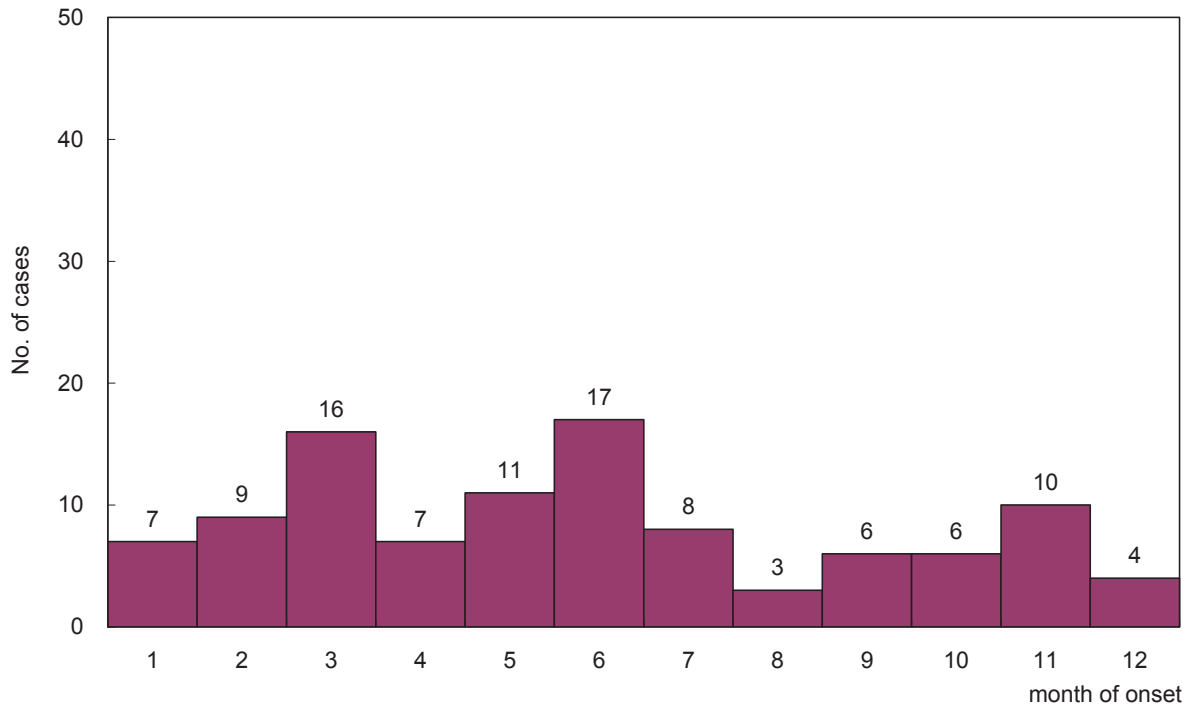


Figure 39 Number of Acute Hepatitis A confirmed cases, 2011

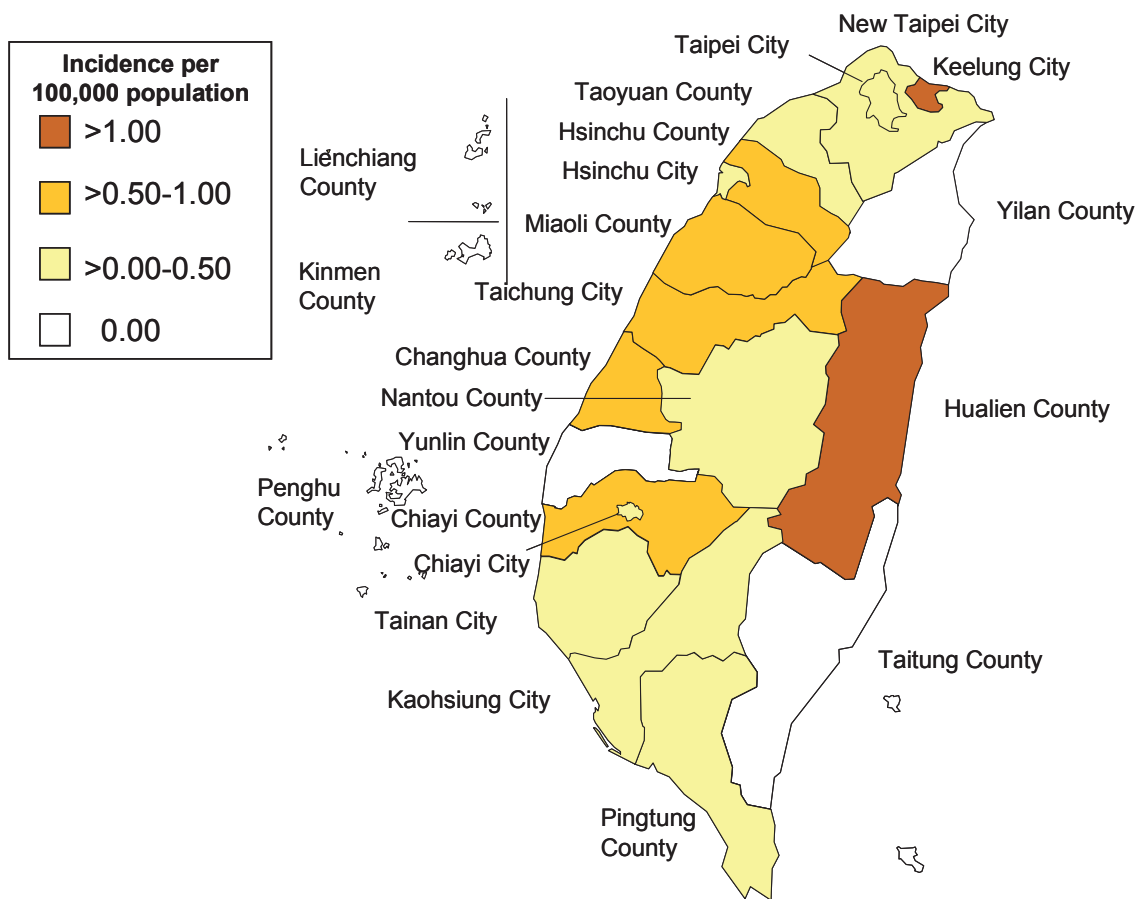


Figure 40 Geographical distribution by incidence of Acute Hepatitis A confirmed cases, 2011

Acute Hepatitis B

In 2011, 163 cases of acute hepatitis B (incidence rate: 0.70 per 100,000 population) were confirmed, which showed a decline when compared with 172 confirmed cases (incidence rate: 0.74 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 99 male cases (60.7%) and 64 female cases (39.3%) with male to female ratio of 1.5:1.0.

(2) By age group

There were 70 cases in 40-64 years age group, 61 cases in 25-39 years age group, 17 cases in 15-24 years age group, 13 cases in 65 years and over age group, and 2 cases in 0-1 year age group.

(3) By month

Confirmed cases occurred in every month of the year without apparent concentration in any of the months. Except for January which had single-digit (5) cases, the other months of the year all had 10 - 20 cases.

(4) By residential region

New Taipei City had the highest number of incidents with 37 cases, followed by Taipei City with 25 cases, Kaohsiung City with 16 cases, Taoyuan County with 14 cases, Tainan City with 12 cases, and Taichung City with 11 cases. The other cities and counties all had less than 10 cases, in which Penghu County and Kinmen County had no confirmed cases.

The incidence rate of acute hepatitis B was the highest in Lienchiang County (9.97 per 100,000 population), followed by Yilan County (1.09 per 100,000 population), and Hsinchu County (0.97 per 100,000 population).

(5) Imported cases and countries of infection

There were 14 imported cases of acute hepatitis B in 2011, including 5 cases from China, 2 cases each from Philippines and Thailand, 1 case each from Indonesia and Australia. There were also 3 cases whose country of origin could not be specifically identified following epidemiological investigation.

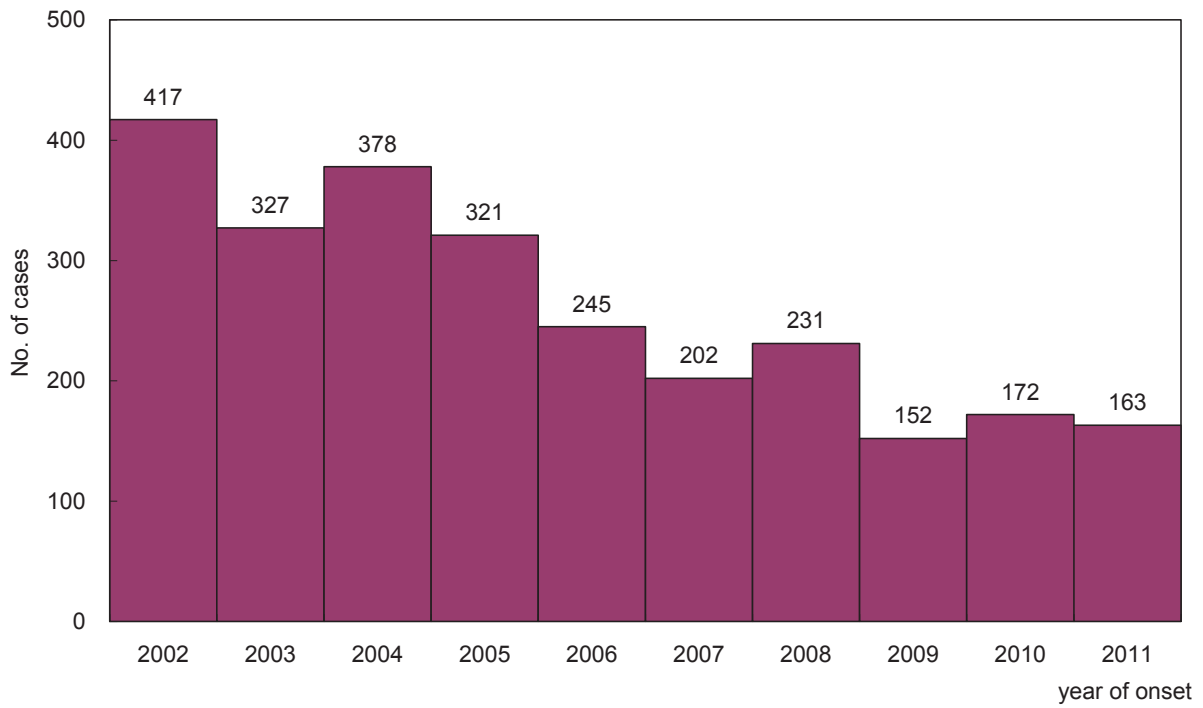


Figure 41 Number of Acute Hepatitis B confirmed cases, 2002-2011

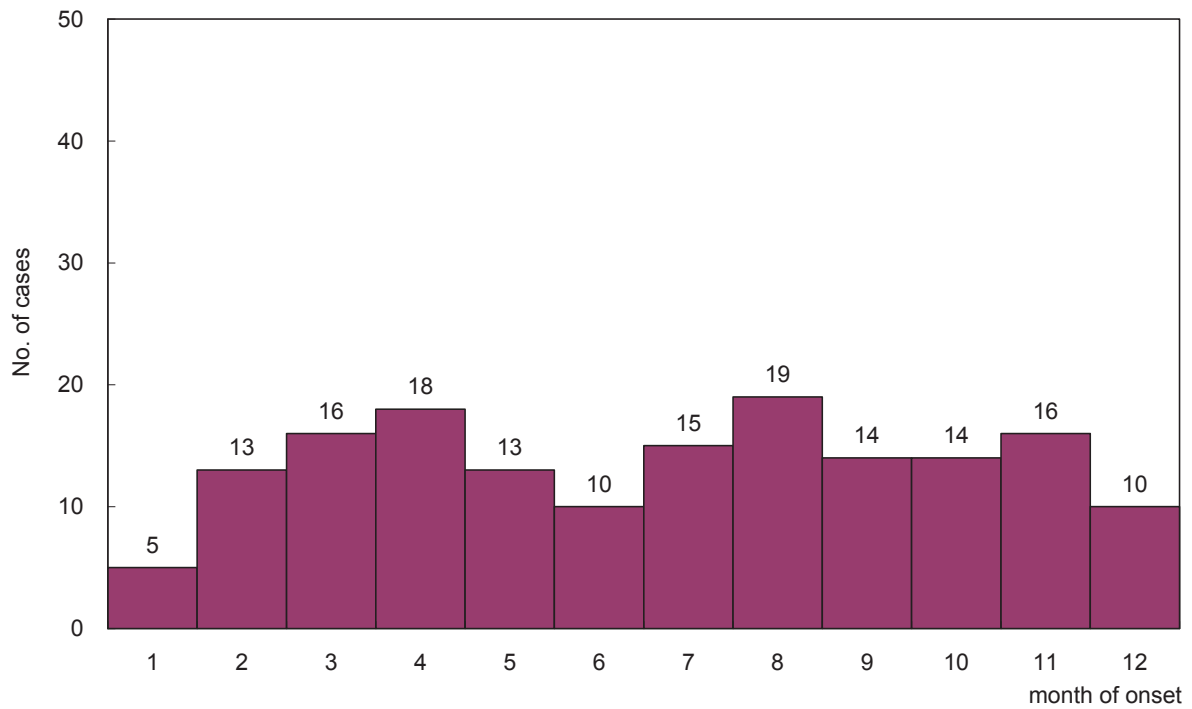


Figure 42 Number of Acute Hepatitis B confirmed cases, 2011

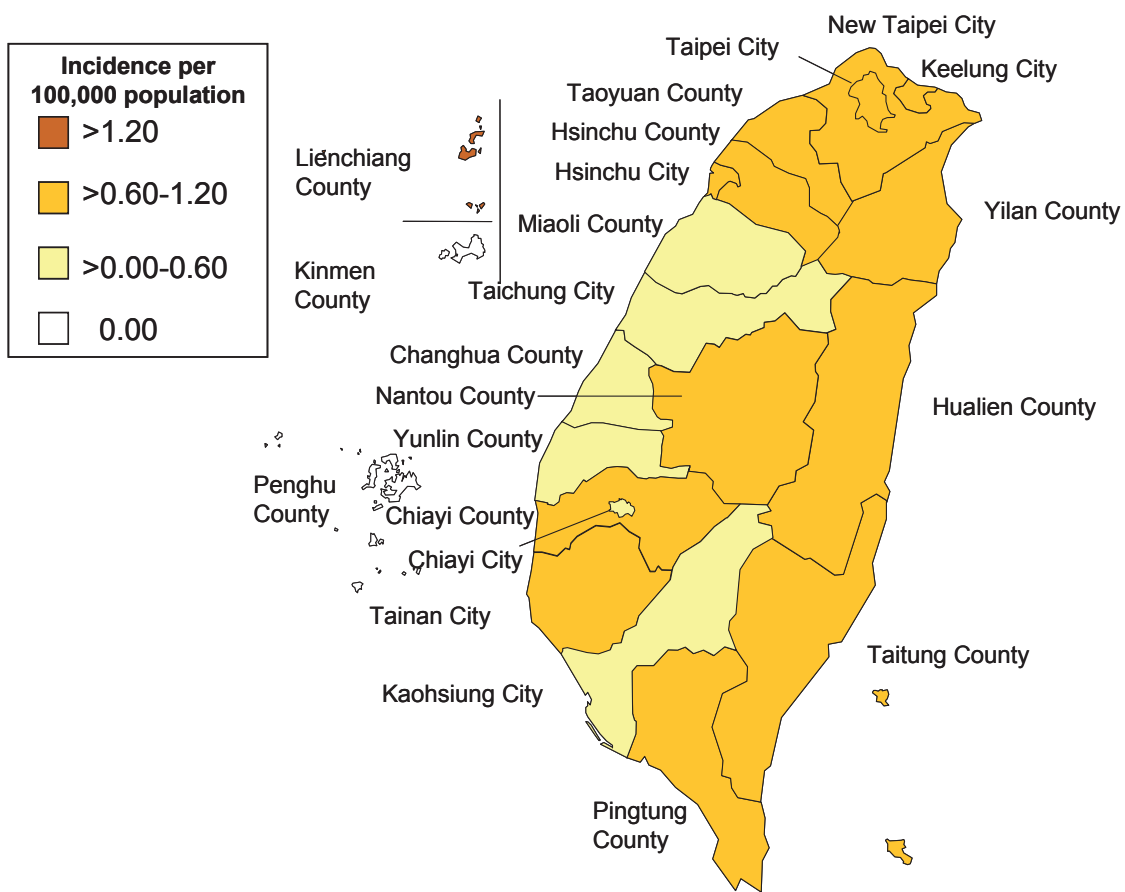


Figure 43 Geographical distribution by incidence of Acute Hepatitis B confirmed cases, 2011

Acute Hepatitis C

In 2011, 34 cases of acute hepatitis C (incidence rate: 0.15 per 100,000 population) were confirmed, which showed a decline when compared with 41 confirmed cases (incidence rate: 0.18 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 19 male cases (55.9%) and 15 female cases (44.1%) with male to female ratio of 1.3:1.0.

(2) By age group

There were 16 cases in 40-64 years age group, 11 cases in 25-39 years age group, 6 cases in 65 years and over age group, and 1 case in 15-24 years age group.

(3) By month

Confirmed cases occurred in every month of the year. Except for October which had 9 cases and September which had 5 cases, the other months of the year all had less than 5 cases.

(4) By residential region

Taipei City and New Taipei City had the most confirmed cases with 5 cases each, followed by Miaoli County, Tainan City, Kaohsiung City and Pingtung County each with 3 cases, Taitung County with 2 cases, and Keelung City, Taoyuan County, Hsinchu City, Hsinchu County, Taichung City, Nantou County, Yunlin County, Chiayi City, Chiayi County and Hualien County each with 1 case. The other cities and counties had no confirmed cases.

The incidence rate of acute hepatitis C was the highest in Taitung County (0.87 per 100,000 population), followed by Miaoli County (0.53 per 100,000 population), and Chiayi City (0.37 per 100,000 population).

(5) Imported cases and countries of infection

There were no imported cases of acute hepatitis C in 2011.

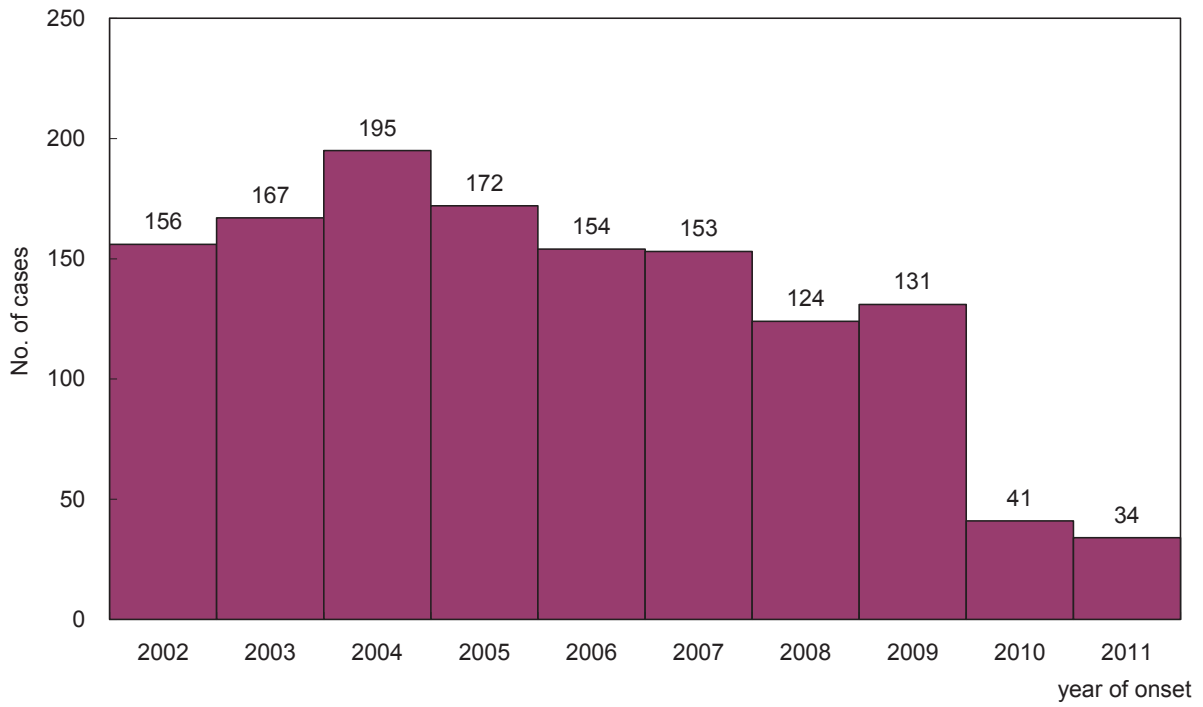


Figure 44 Number of Acute Hepatitis C confirmed cases, 2002-2011

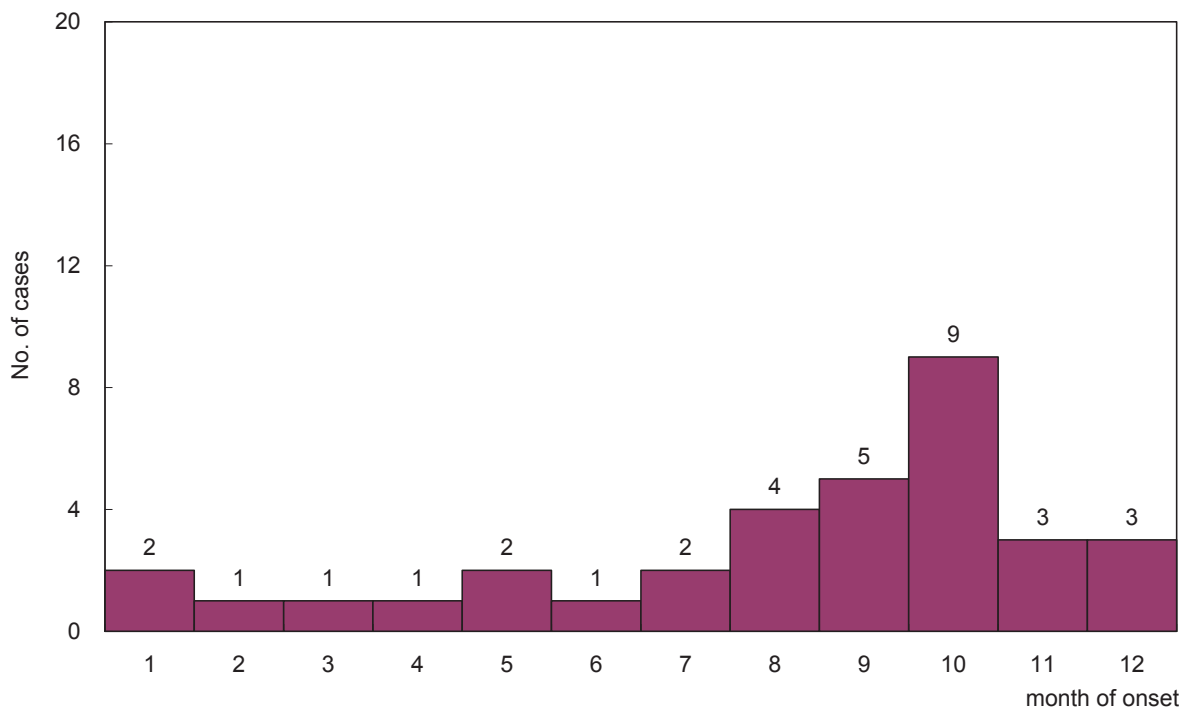


Figure 45 Number of Acute Hepatitis C confirmed cases, 2011

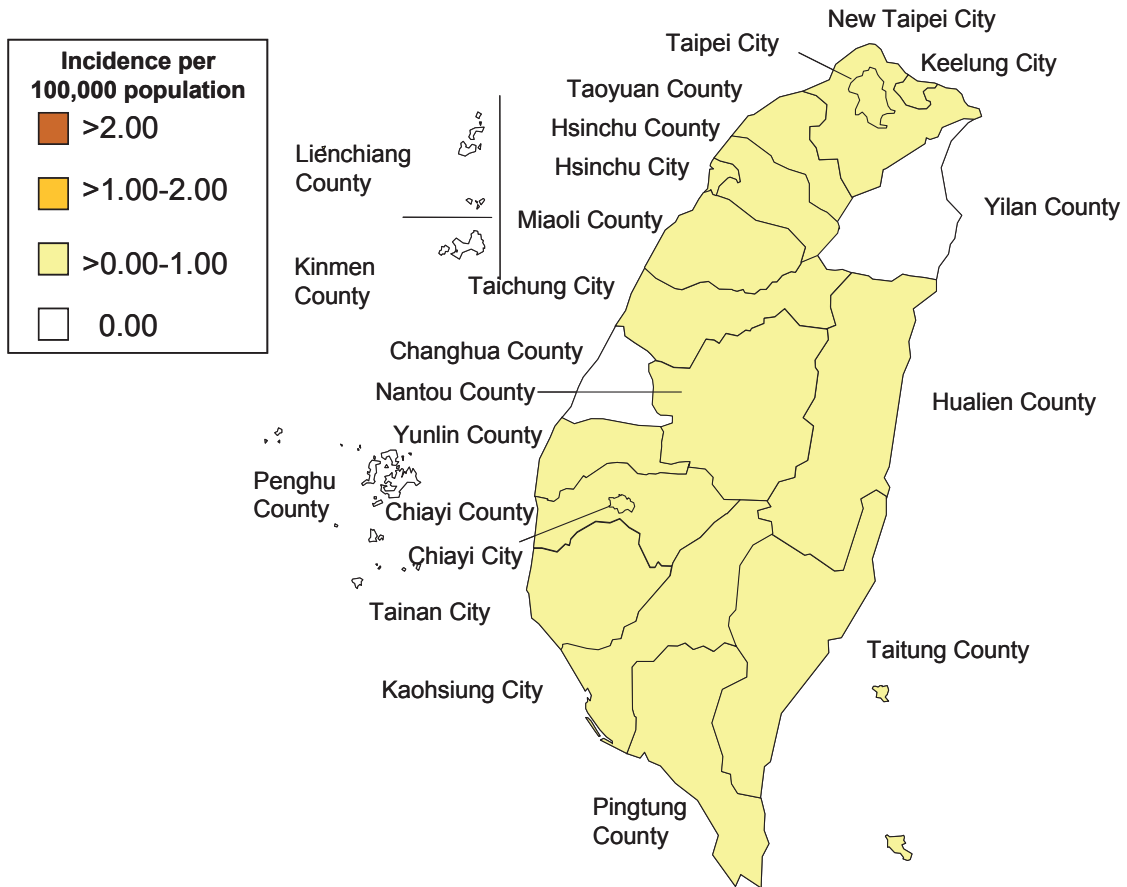


Figure 46 Geographical distribution by incidence of Acute Hepatitis C confirmed cases, 2011

Scrub Typhus

In 2011, 322 cases of scrub typhus (incidence rate: 1.39 per 100,000 population) were confirmed, which showed a decline when compared with 402 confirmed cases (incidence rate: 1.74 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 200 male cases (62.1%) and 122 female cases (37.9%) with male to female ratio of 1.6:1.0.

(2) By age group

The cases occurred predominantly in adults over 25 years of age. In all, there were 143 cases in 40-64 years age group, 80 cases in 25-39 years age group, 45 cases in 15-24 years age group, 38 cases in 65 years and over age group, 10 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 June had the highest number of incidents with 64 cases, followed by 63 cases in July, 47 cases in August, 31 cases in December, 27 cases each in January and October, 19 cases in September, 18 cases in May, and 15 cases in November. The other months of the year all had less than 10 cases.

(4) By residential region

Kinmen County had the highest number of incidents with 77 cases, followed by Taitung County with 50 cases, Hualien County with 36 cases, Kaohsiung City with 23 cases, Taipei City, Penghu County and Lienchiang County with 19 cases each, Nantou County with 15 cases, Taichung City with 13 cases, and New Taipei City with 12 cases. The other cities and counties all had less than 10 cases, in which Keelung City had no confirmed cases.

The incidence rate of scrub typhus was the highest in Lienchiang County (189.51 per 100,000 population), followed by Kinmen County (76.52 per 100,000 population), Taitung County (21.79 per 100,000 population), Penghu County (19.58 per 100,000 population), and Hualien County (10.66 per 100,000 population), whereas the other cities and counties had incidence rate below 10.00 per 100,000 population.

(5) Imported cases and countries of infection

There were two imported cases of scrub typhus in 2011 with one each from China and Italy.

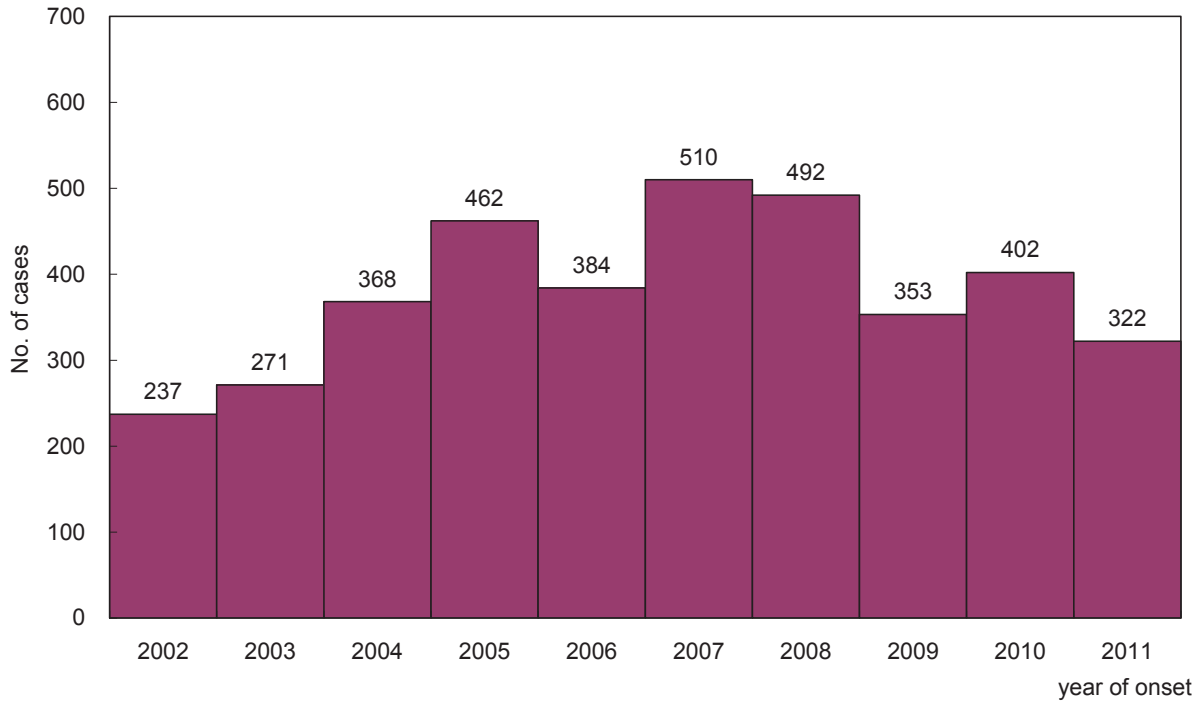


Figure 47 Number of Scrub Typhus confirmed cases, 2002-2011

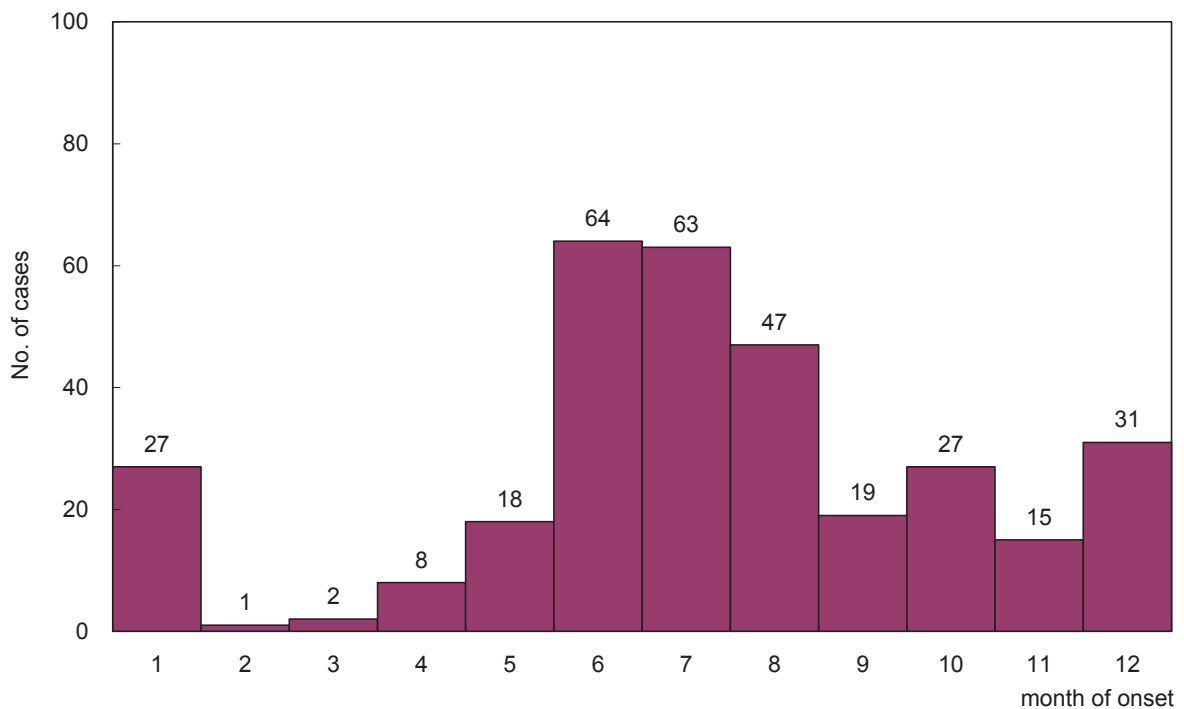


Figure 48 Number of Scrub Typhus confirmed cases, 2011

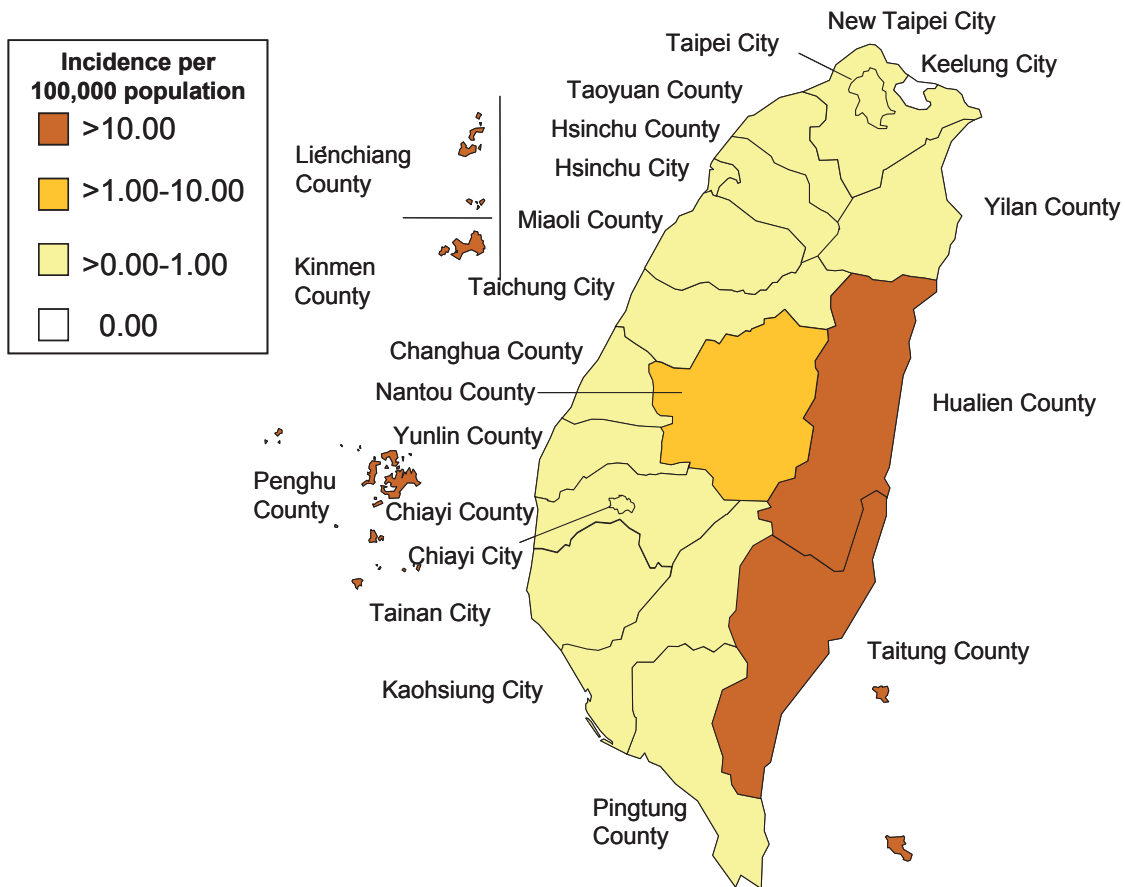


Figure 49 Geographical distribution by incidence of Scrub Typhus confirmed cases, 2011

Legionellosis

In 2011, 97 cases of legionellosis (incidence rate: 0.42 per 100,000 population) were confirmed, which showed a decline when compared with 102 confirmed cases (incidence rate: 0.44 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 77 male cases (79.4%) and 20 female cases (20.6%) with male to female ratio of 3.9:1.0.

(2) By age group

The cases occurred predominantly in elderly people. In all, there were 51 cases in 65 years and over age group, 41 cases in 40-64 years age group, 3 cases in 25-39 years age group, and 1 case each in 15-24 and 5-14 years age groups.

(3) By month

Confirmed cases occurred in every month of the year where April had the most cases with 12 cases reported, followed by 10 cases each in June and November, 9 cases each in May and September, 8 cases each in January and February, 7 cases each in March, August and December, and 5 cases each in July and October.

(4) By residential region

New Taipei City had the highest number of incidents with 19 cases, followed by Taipei City with 16 cases, Tainan City with 10 cases, Taoyuan County, Taichung City and Kaohsiung City each with 8 cases, Changhua County with 6 cases, and Hualien County with 5 cases. The other cities and counties had less than 5 cases, in which Keelung City, Hsinchu City, Chiayi City, Chiayi County, Kinmen County and Lienchiang County had no confirmed cases.

The incidence rate of legionellosis was the highest in Hualien County (1.48 per 100,000 population), followed by Taitung County (1.31 per 100,000 population), and Penghu County (1.03 per 100,000 population).

(5) Imported cases and countries of infection

There were 6 imported cases of legionellosis in 2011, including 5 cases from China and 1 case from Japan.

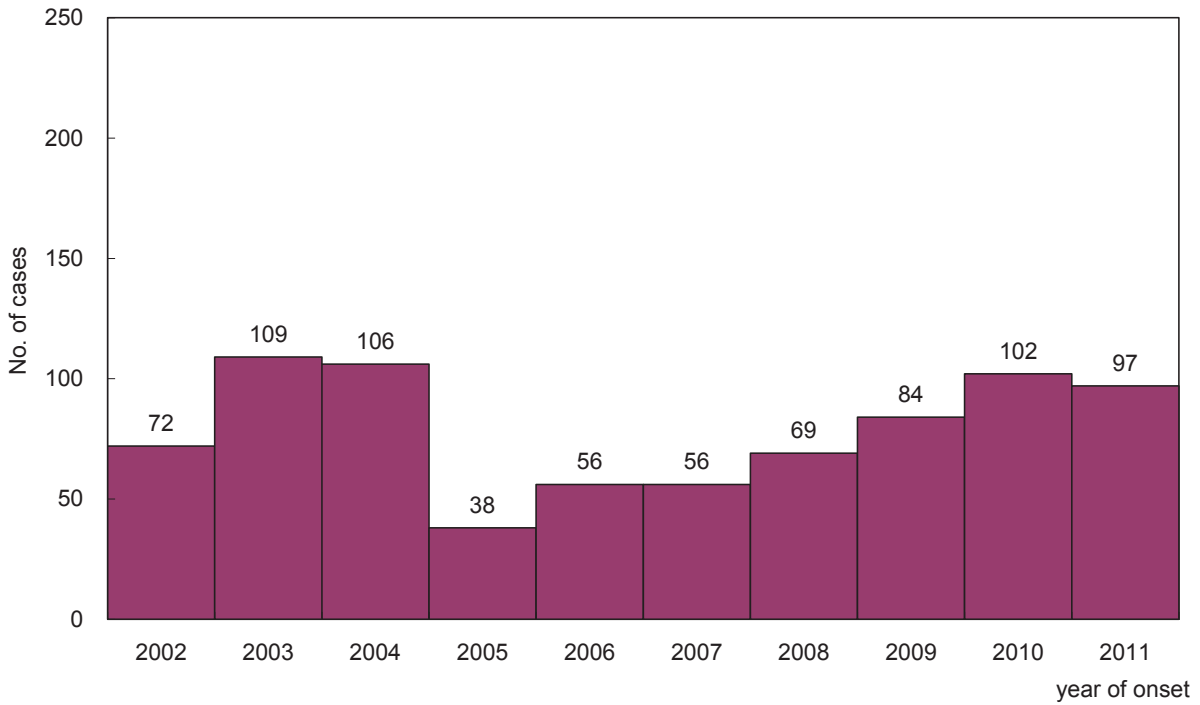


Figure 50 Number of Legionellosis confirmed cases, 2002-2011

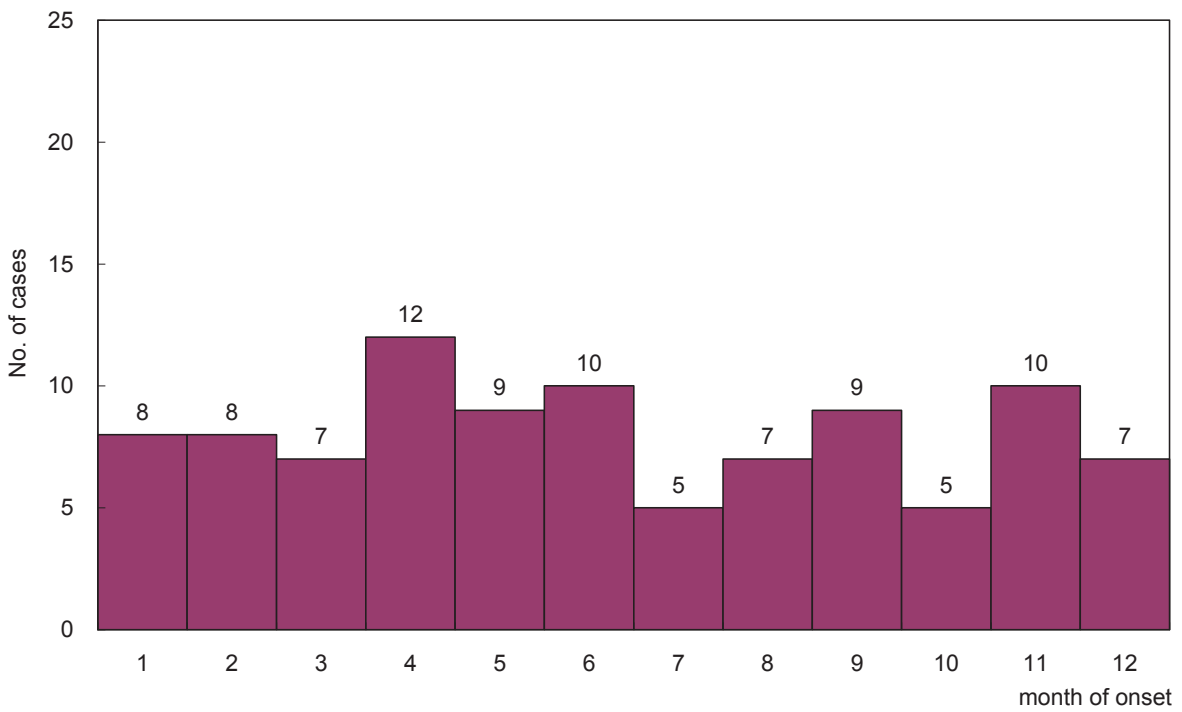


Figure 51 Number of Legionellosis confirmed cases, 2011

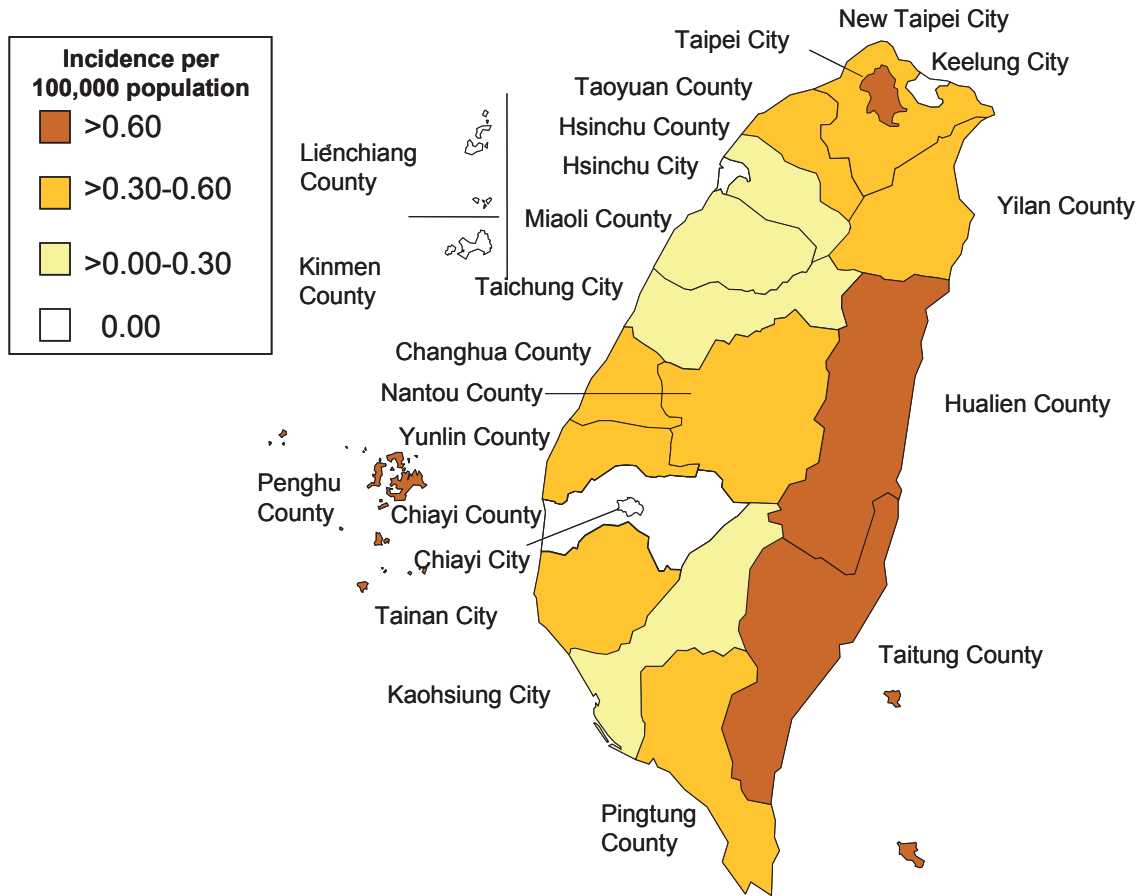


Figure 52 Geographical distribution by incidence of Legionellosis confirmed cases, 2011

Dengue Fever

In 2011, 1,702 cases of dengue fever (incidence rate: 7.34 per 100,000 population) were confirmed, which showed a decline when compared with 1,896 confirmed cases (incidence rate: 8.19 per 100,000 population) in 2010.

Also, 22 cases of dengue hemorrhagic fever/dengue shock syndrome (incidence rate: 0.09 per 100,000 population) were confirmed in 2011, which showed a slight increase when compared with 21 cases (incidence rate: 0.09 per 100,000 population) in 2010.

Of the 1,702 confirmed cases, there were 157 imported cases and 1,545 indigenous cases, including 22 confirmed cases of dengue hemorrhagic fever (2 imported and 20 indigenous). Those imported dengue hemorrhagic fever cases were resident in Taichung City (1 case) and Tainan City (1 case); and indigenous cases were resident in Kaohsiung City (19 cases) and Pingtung County (1 case). The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

In the 157 imported cases, there were 94 male cases (59.9%) and 63 female cases (40.1%) with male to female ratio of 1.5:1.0.

In the 1,545 indigenous cases, there were 762 male cases (49.3%) and 783 female cases (50.7%) with male to female ratio of 1.0:1.0.

(2) By age group

In the 157 imported cases, 2 cases (1.3%) were in 1-4 years age group, 10 cases (6.4%) were in 5-14 years age group, 19 cases (12.1%) were in 15-24 years age group, 74 cases (47.1%) were in 25-39 years age group, 46 cases (29.3%) were in 40-64 years age group, and 6 cases (3.8%) were in 65 years and over age group.

In the 1,545 indigenous cases, 1 case (0.1%) was in the 0-1 year age group, 8 cases (0.5%) were in 1-4 years age group, 106 cases (6.9%) were in 5-14 years age group, 133 cases (8.6%) were in 15-24 years age group, 354 cases (22.9%) were in 25-39 years age group, 735 cases (47.6%) were in 40-64 years age group, and 208 cases (13.5%) were in 65 years and over age group.

(3) By month

In the 157 imported cases, confirmed cases occurred in every month of the year except in March. In all, August had the highest number of incidents with 35 cases, followed by 19 cases in July, 16 cases each in October and November, 14 cases each in February, June and December, 13 cases in September, 6 cases each in January and May, and 4 cases in April.

In the 1,545 indigenous cases, confirmed cases occurred in every month of the year except for March through June. In all, August through December had the highest number of incidents with

more than 100 cases in each of these months, in particular November that had 589 cases, followed by 390 cases in October, 262 cases in December, 161 cases in September, 124 cases in August, 11 cases in January and 4 cases each in February and July.

(4) By residential region

In the 157 imported cases, the number of incidents was the highest in Taipei City with 30 cases, followed by 26 cases in New Taipei City, 23 cases in Taoyuan County, 18 cases in Taichung City, 17 cases in Tainan City, and 15 cases in Kaohsiung City. The other cities and counties all had less than 10 imported cases, in which Pingtung County, Hualien County, Taitung County, Penghu County and Lienchiang County did not have confirmed imported cases.

The 1,545 indigenous cases were spread in 10 cities and counties, including 1,168 cases in Kaohsiung City, 149 cases in Pingtung County, 98 cases in Penghu County, 95 cases in Tainan City, 24 cases in Taipei City, and 4 cases each in New Taipei City and Taichung City, and 1 case each in Taoyuan County, Miaoli County and Yilan County.

Overall, the incidence rate of dengue fever was the highest in Penghu County (100.99 per 100,000 population), followed by Kaohsiung City (42.65 per 100,000 population), and Pingtung County (17.15 per 100,000 population).

(5) Imported cases and countries of infection

In the 157 imported cases, there were 34 cases each from Philippines and Vietnam, 25 cases from Indonesia, 21 cases from Thailand, 13 cases from Malaysia, 8 cases each from India and Cambodia, 6 cases from Bangladesh, and 4 cases each from Singapore and Myanmar.

(6) By virus type

In the 157 imported cases, 34 cases were caused by dengue virus type 1, 37 cases by type 2, 15 cases by type 3, and 13 cases by type 4. The other 58 cases were unable to be subtyped.

In the 1,545 indigenous cases, 63 cases were caused by dengue virus type 1, 735 cases by type 2, 84 cases by type 3, and 1 case by type 4. The other 662 cases were unable to be subtyped.

(7) By clinical symptoms

In the 1,702 confirmed cases, 1,639 cases experienced clinical symptoms, while the other 63 cases were infected without any symptoms. In the 157 imported cases, 7 cases were no symptoms, and in the 1,545 indigenous cases, 56 cases were no symptoms.

Table 26 Virus type and infection source of Dengue Fever confirmed case, 2011

Virus type/ infection source	DEN-1	DEN-2	DEN-3	DEN-4	Undetermined	Total
Philippines	8	9	4	5	8	34
Vietnam	10	7	1	1	15	34
Indonesia	3	6	5	3	8	25
Thailand	1	9	-	1	10	21
Malaysia	2	2	1	2	6	13
India	2	1	3	-	2	8
Cambodia	5	-	-	-	3	8
Bangladesh	1	-	1	-	4	6
Singapore	1	3	-	-	-	4
Myanmar	1	-	-	1	2	4
Taiwan	63	735	84	1	662	1,545
Total	97	772	99	14	720	1,702

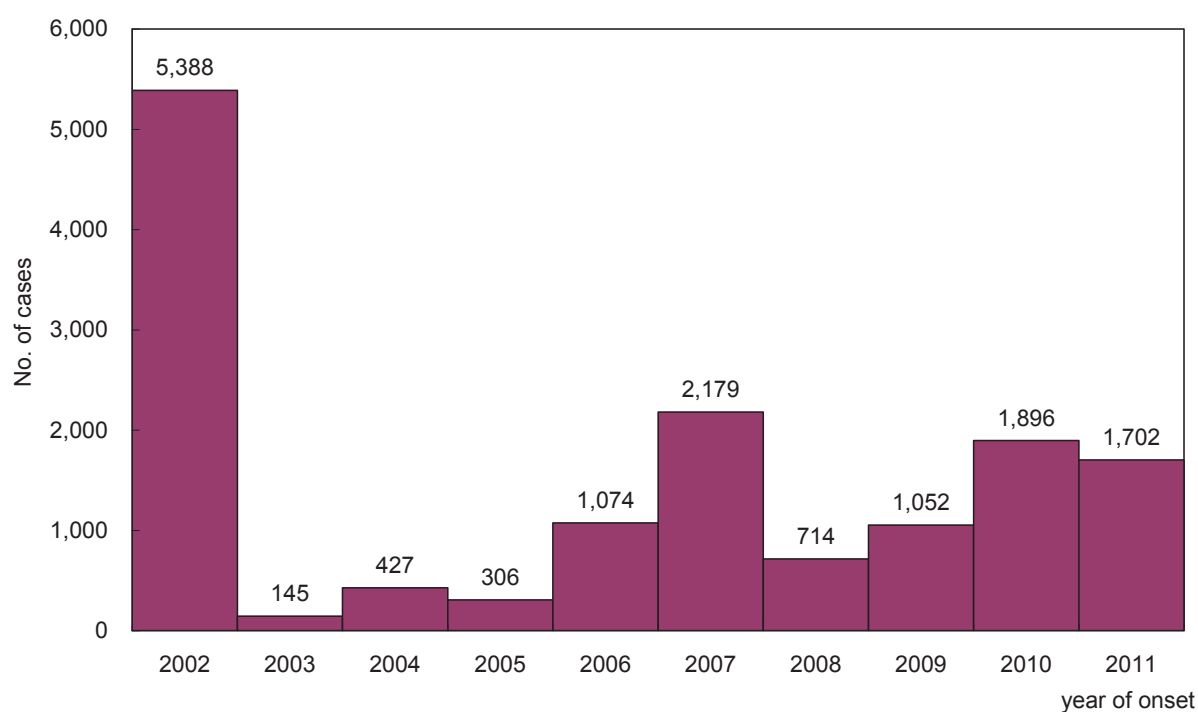


Figure 53 Number of Dengue Fever confirmed cases, 2002-2011

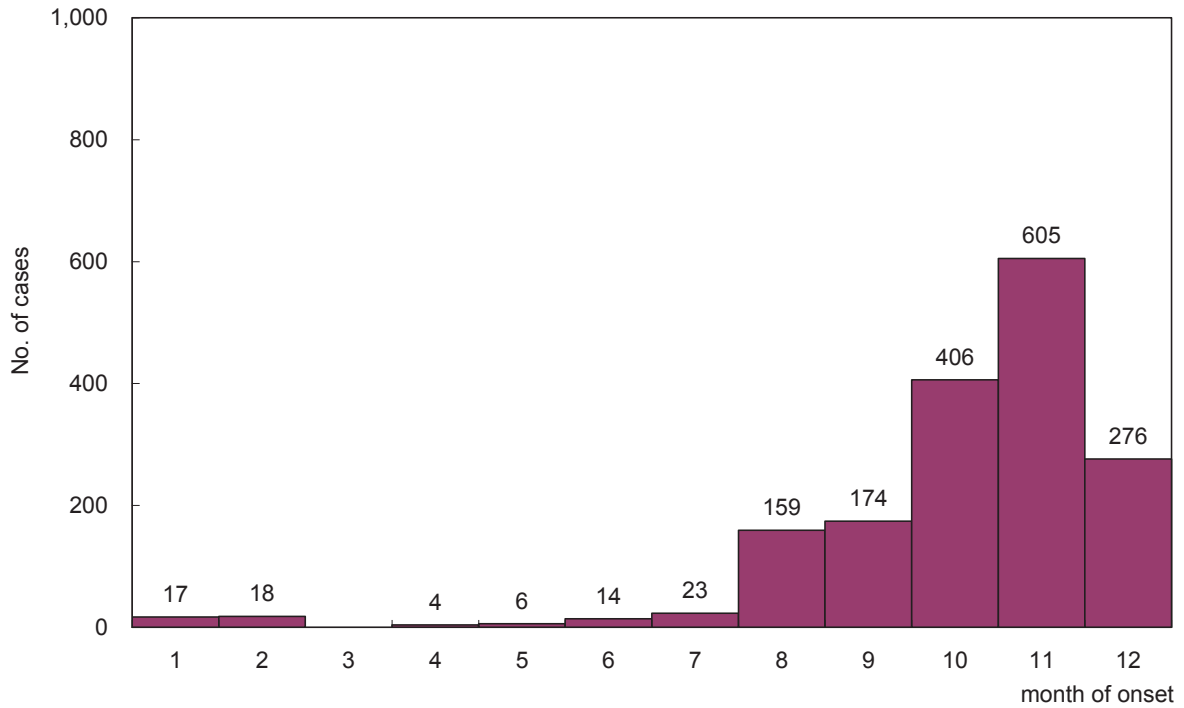


Figure 54 Number of Dengue Fever confirmed cases, 2011

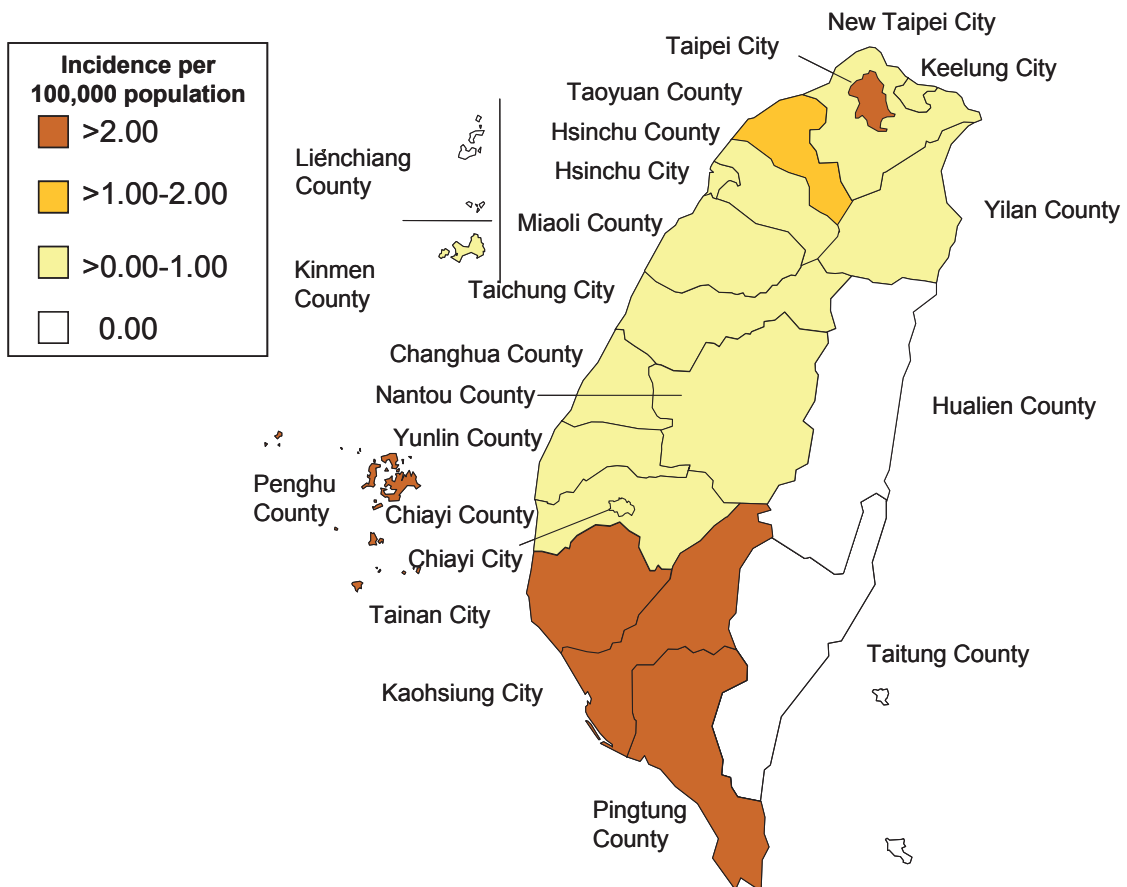


Figure 55 Geographical distribution by incidence of Dengue Fever confirmed cases, 2011

Enteroviruses Infection with Severe Complications

In 2011, 59 cases of enteroviruses infection with severe complications (incidence rate: 0.25 per 100,000 population) were confirmed, which showed a sharp increase when compared with 16 confirmed cases (incidence rate: 0.07 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 37 male cases (62.7%) and 22 female cases (37.3%) with male to female ratio of 1.7:1.0.

(2) By age group

The cases occurred primarily in age groups under 14 years of age. In all, there were 40 cases in 1-4 years age group (10 cases were 1 year of age, 17 cases were 2 years of age, 7 cases were 3 years of age, and 6 cases were 4 years of age), 11 cases in 5-14 years age group, and 8 cases in 0-1 year age group.

Of the 8 cases in 0-1 year age group, 2 cases each were 4 months old and 11 months old, and 1 case each was 3 months old, 5 months old, 7 months old and 9 months old.

(3) By month

The confirmed cases were occurred in July through December where November had the highest number of incidents (22 cases), followed by 16 cases in December, 7 cases in September, 6 cases in October, 5 cases in August and 3 cases in July.

(4) By residential region

Yunlin County and Chiayi County had the highest number of incidents with 9 cases each, followed by Taichung City, Changhua County and Tainan City with 7 cases each, Taoyuan County with 4 cases, New Taipei City, Chiayi City and Kaohsiung City with 3 cases each, Hsinchu City with 2 cases, and Taipei City, Nantou County, Hualian County, Taitung County and Kinmen County with 1 case each. The other cities and counties had no confirmed cases.

The incidence rate of enteroviruses infection with severe complications was the highest in Chiayi County (1.66 per 100,000 population), followed by Yunlin County (1.26 per 100,000 population), and Chiayi City (1.10 per 100,000 population).

(5) Imported cases and countries of infection

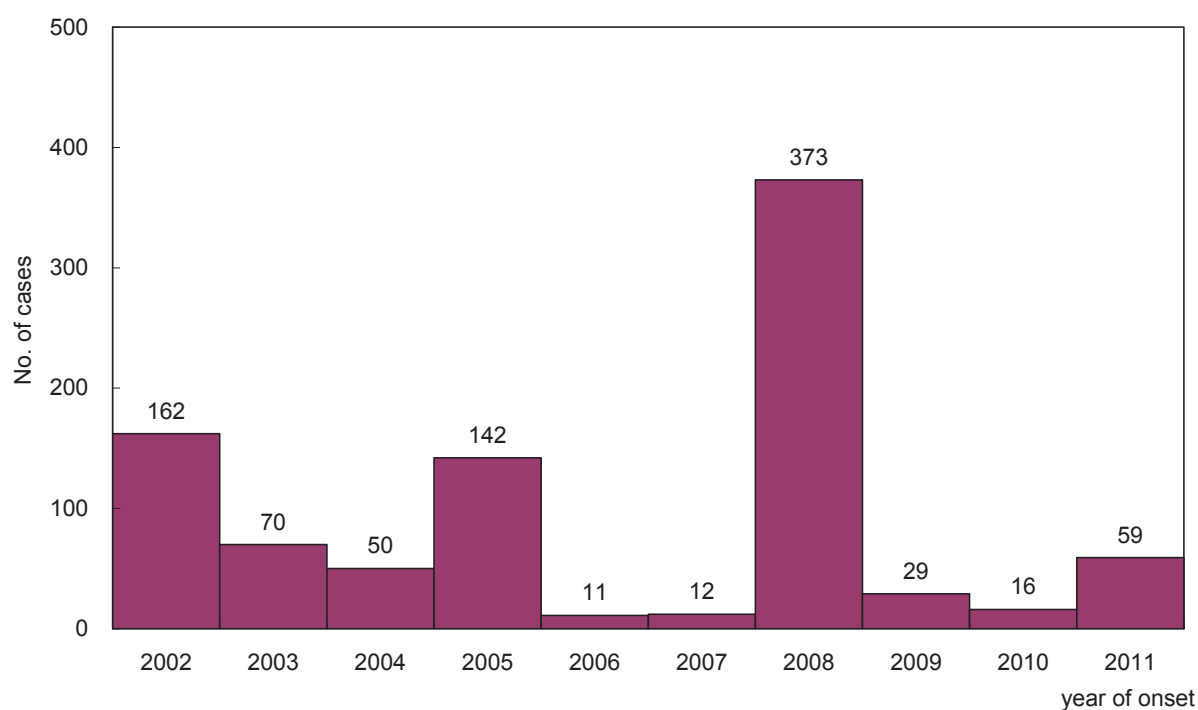
There were no imported cases of enteroviruses infection with severe complications in 2011.

(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 58 cases, and Coxsackie virus A10 was isolated in one case.

Table 27 Number of Enteroviruses Infection with Severe Complications confirmed cases by age, 2008-2011

	2008		2009		2010		2011	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
>=0, <7m	26 (7.0)	2 (6.9)	3 (18.8)	4 (6.8)				
>=7m, <1yr	39 (10.5)	2 (6.9)	3 (18.8)	4 (6.8)				
>=1, <4 yrs	245 (65.7)	19 (65.5)	9 (56.3)	34 (57.6)				
>=4, <7 yrs	52 (13.9)	2 (6.9)	1 (6.3)	14 (23.7)				
>=7, <16 yrs	11 (2.9)	4 (13.8)	- (-)	3 (5.1)				
>=16 yrs	- (-)	- (-)	- (-)	- (-)				
Unknown	- (-)	- (-)	- (-)	- (-)				
Total	373 (100.0)	29 (100.0)	16 (100.0)	59 (100.0)				

**Figure 56** Number of Enteroviruses Infection with Severe Complications confirmed cases, 2002-2011

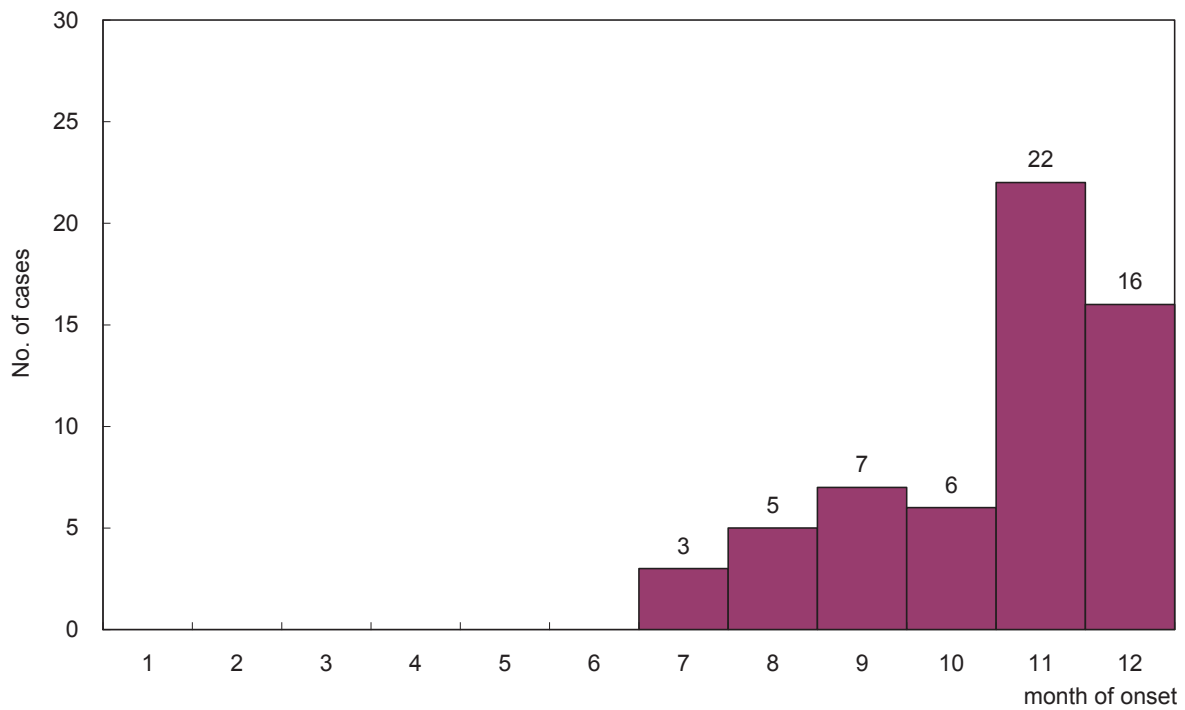


Figure 57 Number of Enterovirus Infection with Severe Complications confirmed cases, 2011

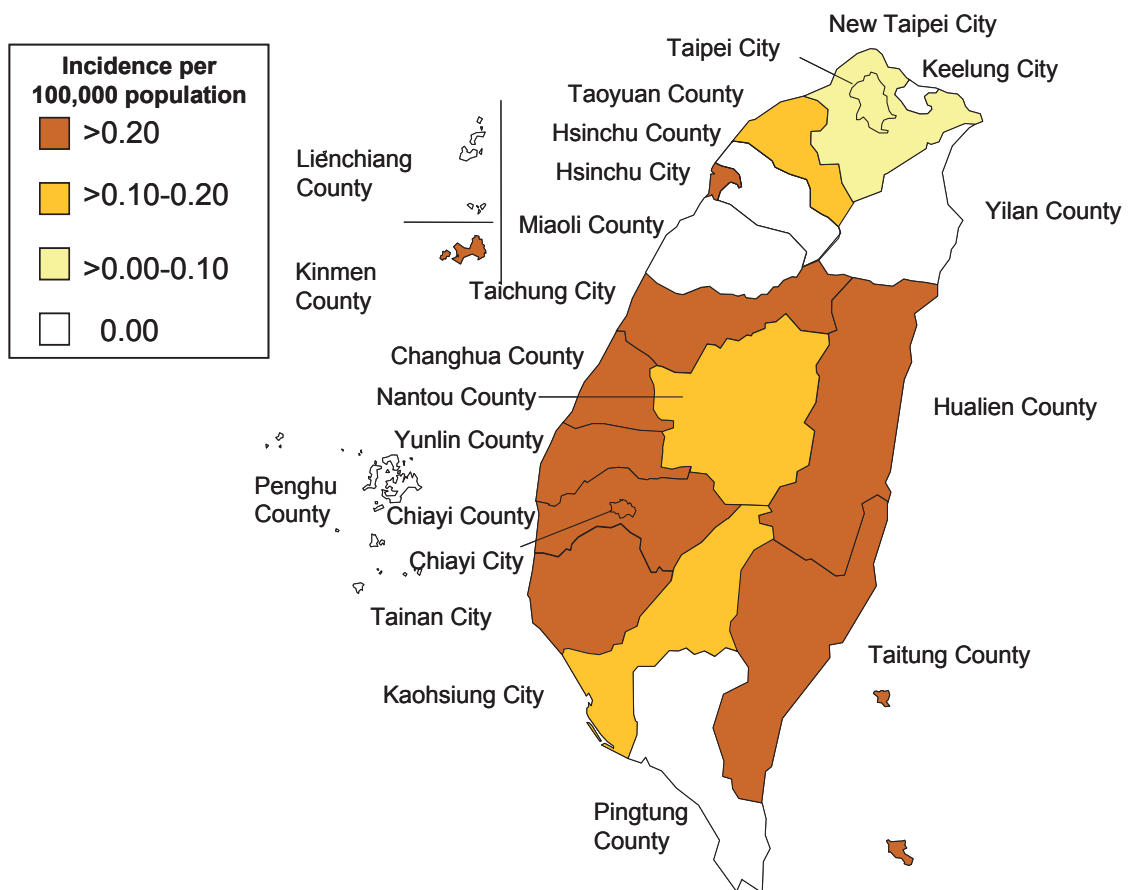


Figure 58 Geographical distribution by incidence of Enterovirus Infection with Severe complication, 2011

Malaria

In 2011, 17 cases of malaria (incidence rate: 0.07 per 100,000 population) were confirmed, which showed a decline when compared with 21 confirmed cases (incidence rate: 0.09 per 100,000 population) in 2010. All cases confirmed in 2011 were imported. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

All cases were male.

(2) By age group

The cases occurred mostly in 25-39 years age group with 9 cases, followed by 40-64 years age group with 7 cases, and 15-24 years age group with 1 case.

(3) By month

There were 4 cases in January, 3 cases in August, 2 cases each in March, September, October, and November, 1 case each in April and May, while no cases were confirmed in the other months of the year.

(4) By residential region

New Taipei City had the highest number of incidents with 4 cases, followed by Taipei City, Taoyuan County and Taichung City each with 3 cases, and Hsinchu City and Tainan City each with 2 cases. The other cities and counties had no confirmed cases.

The incidence rate of malaria was the highest in Hsinchu City (0.48 per 100,000 population), followed by Taoyuan County (0.15 per 100,000 population), and Taipei City, Taichung City and Tainan City, all ranking the third with incidence rate of 0.11 per 100,000 population.

(5) Imported cases and countries of infection

In the 17 imported cases, 9 cases (52.9%) were from Asia, specifically with 5 cases from Myanmar, and 1 case each from Thailand, Indonesia, India and Saudi Arabia; 7 cases (41.2%) were from Africa, specifically with 2 cases from Nigeria, and 1 case each from Burkina Faso, Gambia, Mozambique, Ghana and Cote d'Ivoire; 1 case (5.9%) was from America, specifically from Honduras.

(6) Types of infectious protozoan

By the types of infectious protozoa, there were 9 cases of *P. falciparum*, 5 cases of *P. vivax*, 2 cases of mixed infection, and 1 case of *P. malariae*.

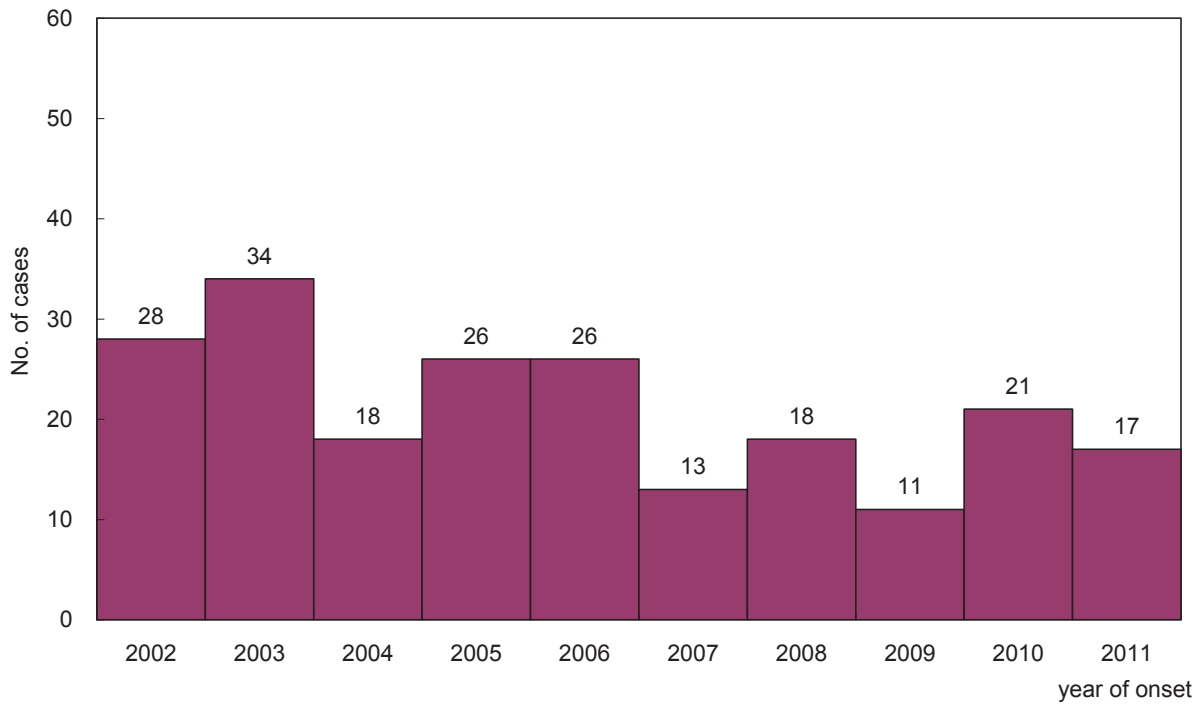


Figure 59 Number of imported Malaria confirmed cases, 2002-2011

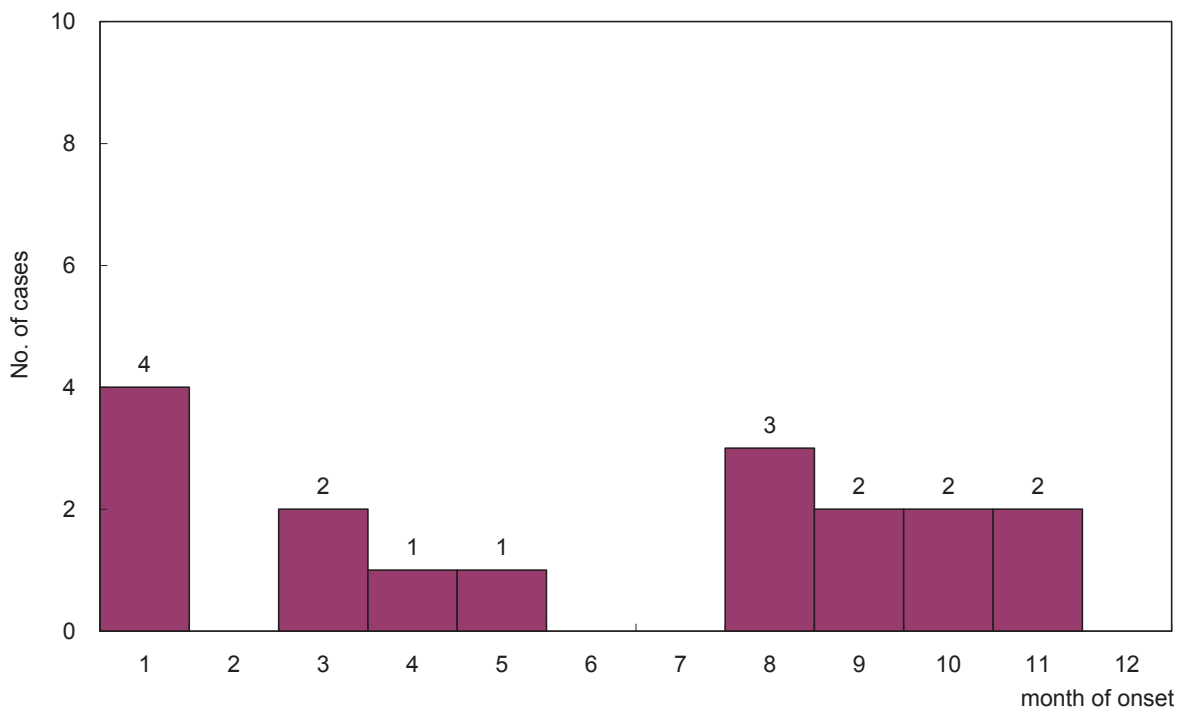


Figure 60 Number of imported Malaria confirmed cases, 2011

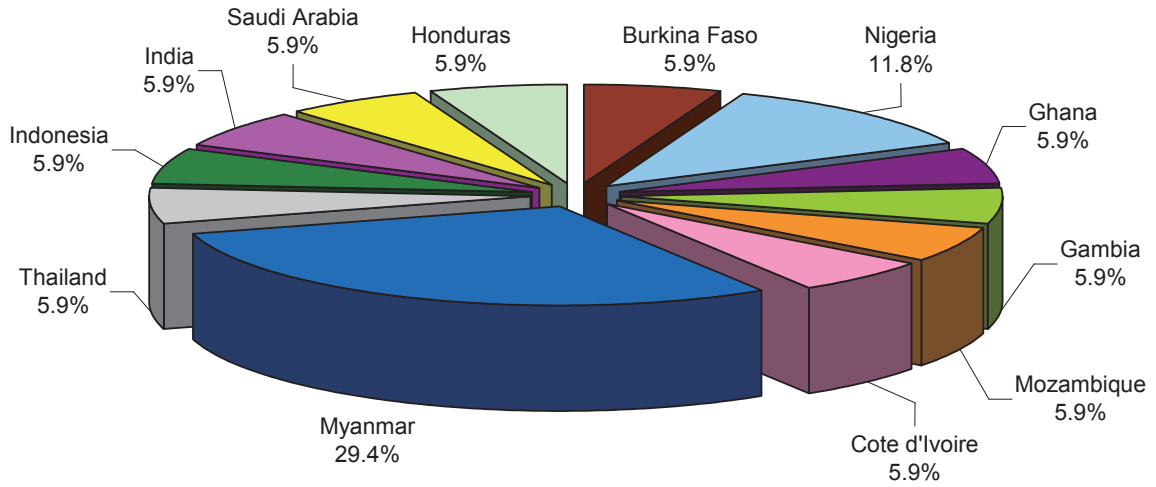


Figure 61 Infections source of imported Malaria confirmed cases, 2011

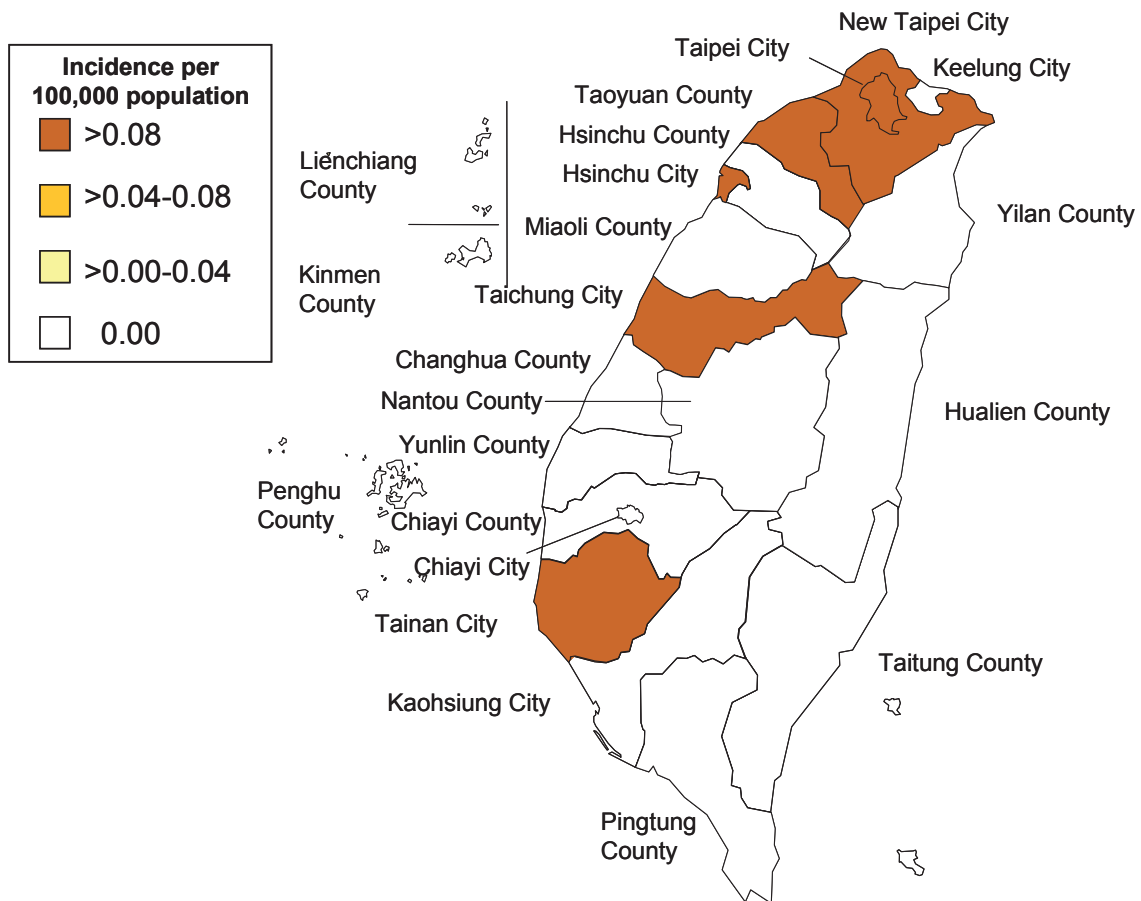


Figure 62 Geographical distribution by incidence of imported Malaria confirmed cases, 2011

Shigellosis

In 2011, 203 cases of shigellosis (incidence rate: 0.88 per 100,000 population) were confirmed, of which 139 cases were imported. In comparison, there were 172 confirmed cases (incidence rate: 0.74 per 100,000 population) in 2010, of which 82 cases were imported. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

In the 139 imported cases, there were 48 male cases (34.5%) and 91 female cases (65.5%) with male to female ratio of 0.5:1.0.

In the 64 indigenous cases, there were 44 male cases (68.8%) and 20 female cases (31.3%) with male to female ratio of 2.2:1.0.

(2) By age group

In the 139 imported cases, there were 92 cases in 25-39 years age group, 29 cases in 15-24 years age group, 9 cases in 40-64 years age group, 5 cases in 5-14 years age group, and 4 cases in 65 years and over age group.

In the 64 indigenous cases, there were 17 cases in 40-64 years age group, 15 cases in 25-39 years age group, 10 cases in 65 years and over age group, 9 cases in 5-14 years age group, 8 cases in 15-24 years age group, and 5 cases in 1-4 years age group.

(3) By month

In the 139 imported cases, confirmed cases were occurred in every month of the year where July had the highest number of incidents with 23 cases, followed by 14 cases each in March, May, October and December, 13 cases each in June and September, 11 cases in August, 9 cases in April, 7 cases in November, 5 cases in January, and 2 cases in February.

In the 64 indigenous cases, confirmed cases were occurred in every month of the year except for August and November. March had the highest number of incidents with 24 cases, followed by 9 cases in January, 6 cases each in April and September, 4 cases each in February, May and October, 3 cases in June and 2 cases each in July and December.

(4) By residential region

In the 139 imported cases, New Taipei City had the highest number of incidents with 38 cases, followed by Taipei City with 24 cases, Taoyuan County with 18 cases, Yilan County with 10 cases, Kaohsiung City with 9 cases, Keelung City and Taichung City each with 8 cases, Changhua County with 6 cases, Hsinchu City and Tainan City each with 4 cases, Hsinchu County with 3 cases, Nantou County and Penghu County each with 2 cases, and Yunlin County, Chiayi County and Pingtung County each with 1 case. The other cities and counties had no confirmed imported cases.

In the 64 indigenous cases, Hualien County had the highest number of incidents with 25 cases, followed by Yilan County with 22 cases, New Taipei City with 5 cases, Tainan City with 4 cases, Taoyuan County with 3 cases, Changhua County and Kaohsiung City each with 2 cases, and Miaoli County with 1 case. The other cities and counties had no confirmed indigenous cases.

In all, the incidence rate of shigellosis was the highest in Hualien County (7.40 per 100,000 population), followed by Yilan County (6.96 per 100,000 population) and Keelung City (2.09 per 100,000 population).

(5) Imported cases and countries of infection

All of the 139 imported cases were from Asian countries, specifically with 83 cases from Indonesia, 18 cases from China, 10 cases from Philippines, 7 cases each from Vietnam and Cambodia, 6 cases from Thailand, 3 cases from Nepal, 2 cases from India, and 1 case each from Macau, Bangladesh and Uzbekistan.

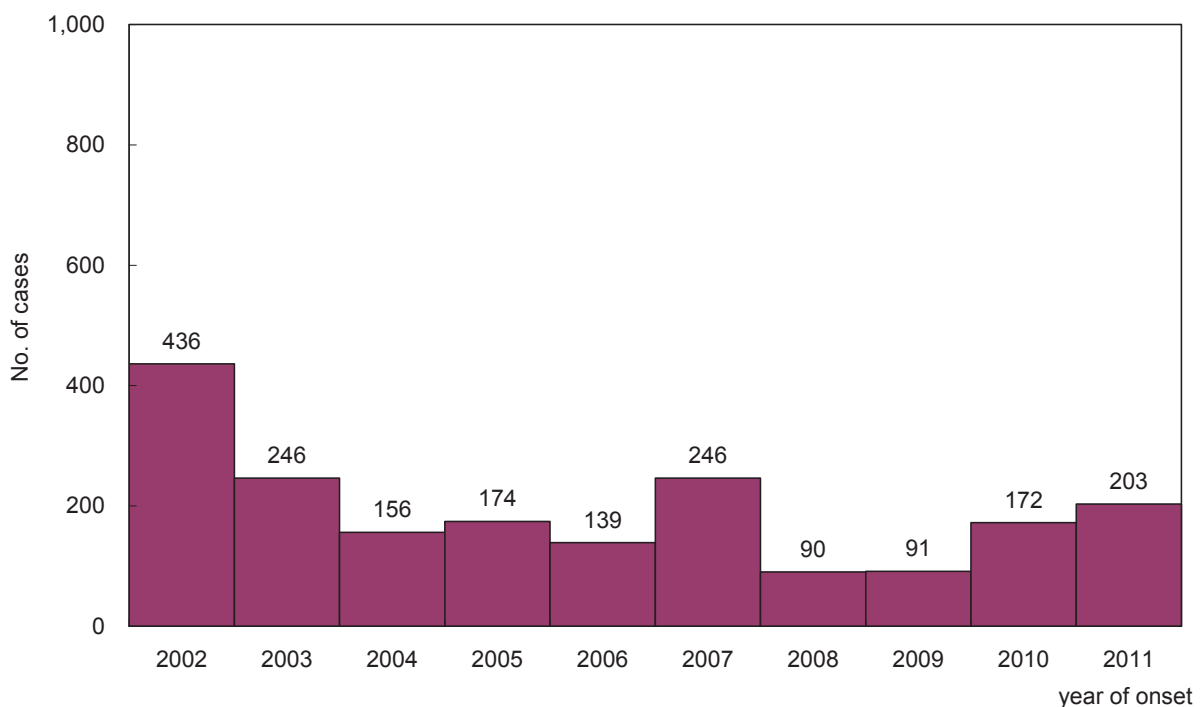


Figure 63 Number of Shigellosis confirmed cases, 2002-2011

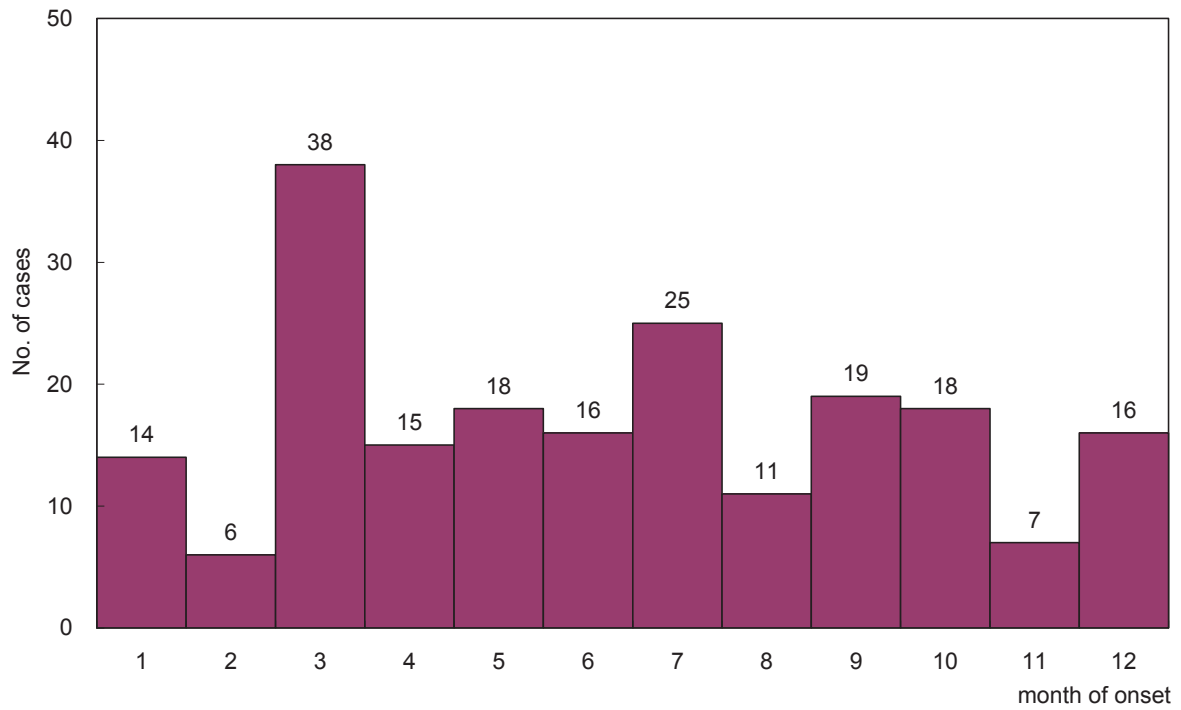


Figure 64 Number of Shigellosis confirmed cases, 2011

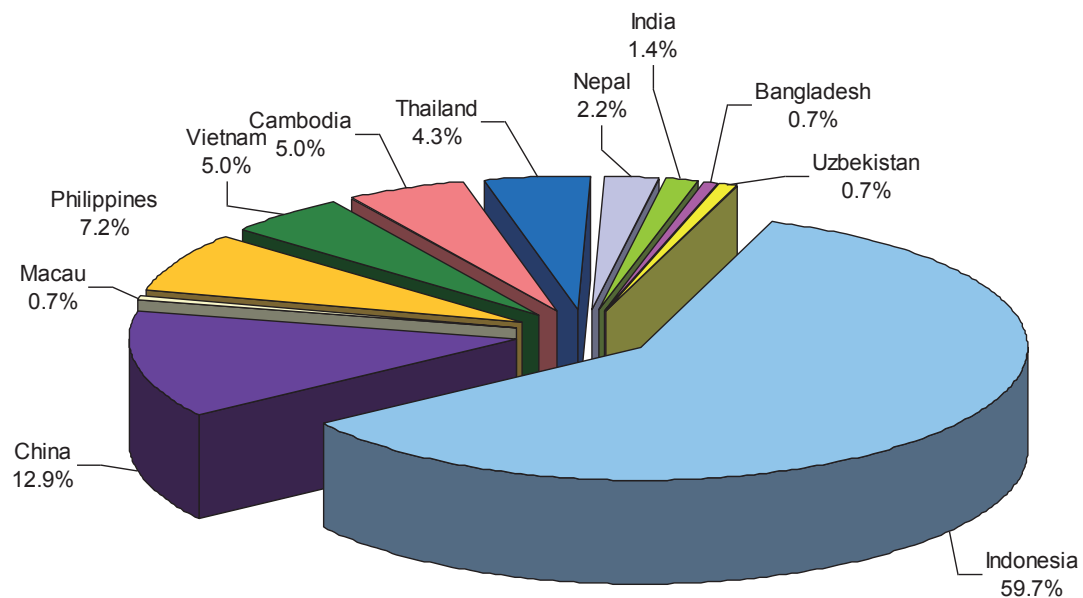


Figure 65 Infections source of Shigellosis confirmed cases, 2011

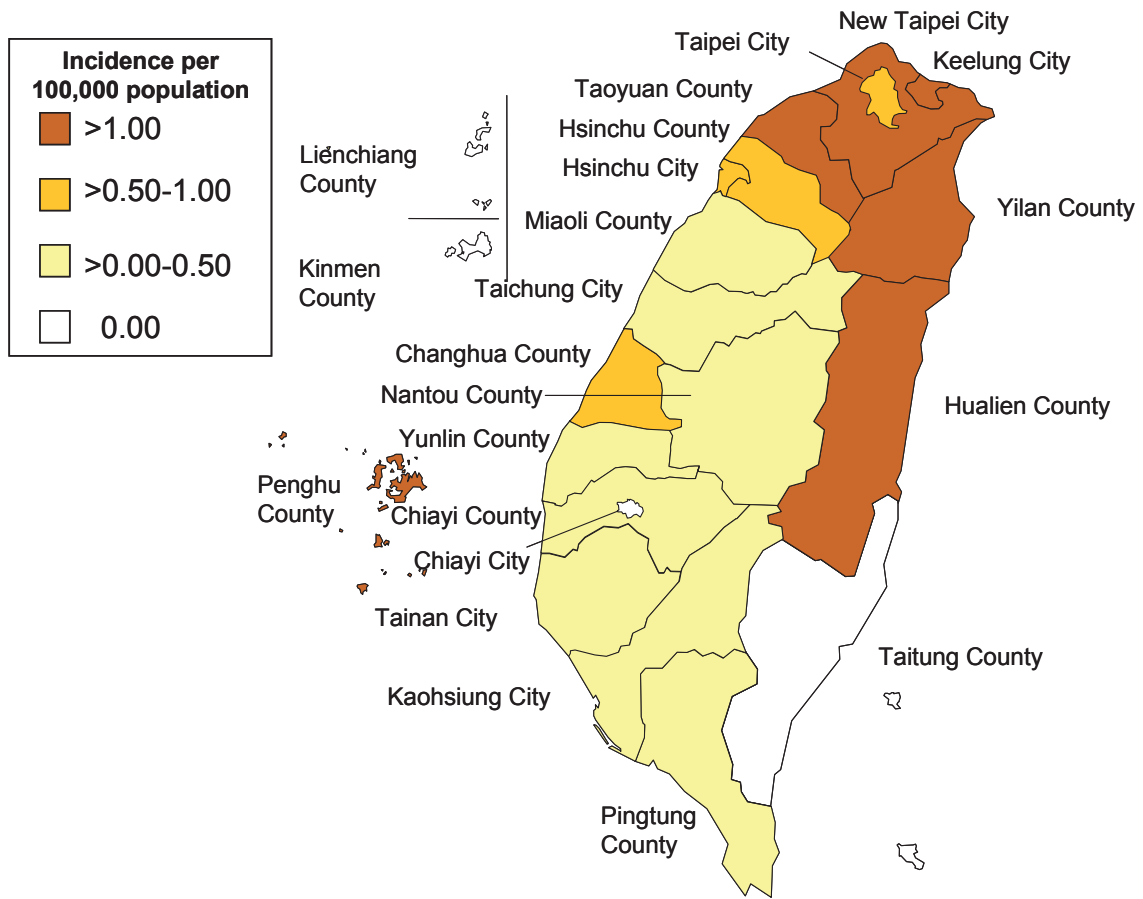


Figure 66 Geographical distribution by incidence of Shigellosis confirmed cases, 2011

Complicated Influenza

In 2011, 1,481 cases of complicated influenza (incidence rate: 6.39 per 100,000 population) were confirmed, which showed a sharp increase when compared with 882 confirmed cases (incidence rate: 3.81 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 807 male cases (54.5%) and 674 female cases (45.5%) with male to female ratio of 1.2:1.0.

(2) By age group

There were 603 cases in 40-64 years age group, 319 cases in 65 years and over age group, 262 cases in 25-39 years age group, 103 cases in 5-14 years age group, 88 cases in 15-24 years age group, 78 cases in 1-4 years age group, and 28 cases in 0-1 year age group.

(3) By month

The cases had spikes in January, February and December with more than 200 cases occurring in each of these months: January had the highest number of incidents with 610 cases (41.2%), followed by 417 cases (28.2%) in February and 239 cases (16.1%) in December. For the other months, there were 56 cases (3.8%) in November, 43 cases (2.9%) in March, 41 cases (2.8%) in October, and 22 cases (1.5%) in August. The remaining 5 months of the year all had less than 20 cases confirmed.

(4) By residential region

All cities and counties had confirmed cases of complicated influenza in 2011. New Taipei City had the highest number of incidents with 416 cases, followed by Kaohsiung City with 188 cases, Taipei City with 171 cases, Taoyuan County with 142 cases, Taichung City with 77 cases, Tainan City with 75 cases, Hualien County with 70 cases, Changhua County with 49 cases, Yunlin County with 48 cases, Pingtung County with 40 cases, Taitung County with 39 cases, and Chiayi County with 32 cases. The other cities and counties all had less than 30 cases.

The incidence rate of complicated influenza was the highest in Hualien County (20.72 per 100,000 population), followed by Taitung County (16.99 per 100,000 population), and Penghu County (12.37 per 100,000 population).

(5) Imported cases and countries of infection

There were 5 imported cases of complicated influenza in 2011, including 3 cases from China, 1 case from Vietnam and 1 case whose country of origin could not be specifically identified following epidemiological investigation.

(6) By virus type

By virus type, there were 1,134 cases associated with influenza A virus (948 cases of A(H1N1)

pdm09, 143 cases of AH3, and 43 cases unable to be subtyped). There were also 346 cases associated with influenza B virus, and only 1 case of simultaneous infected with A(H1N1)pdm09 and influenza B virus.

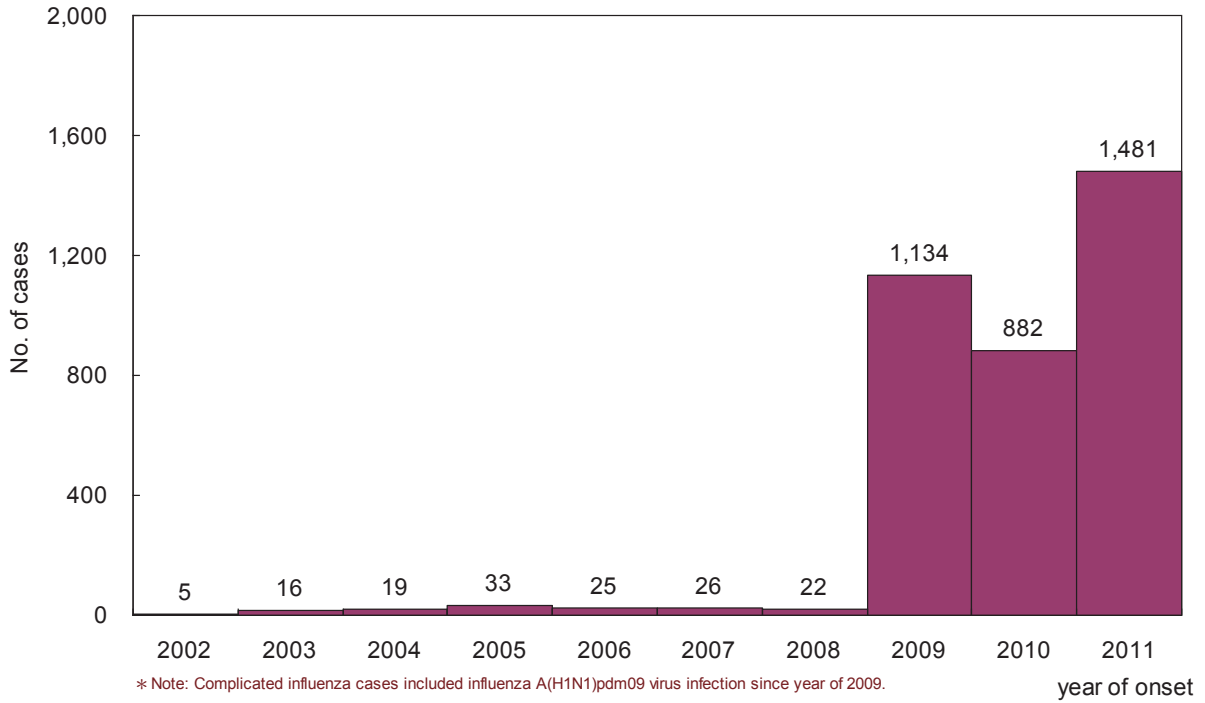


Figure 67 Number of Complicated Influenza confirmed cases, 2002-2011

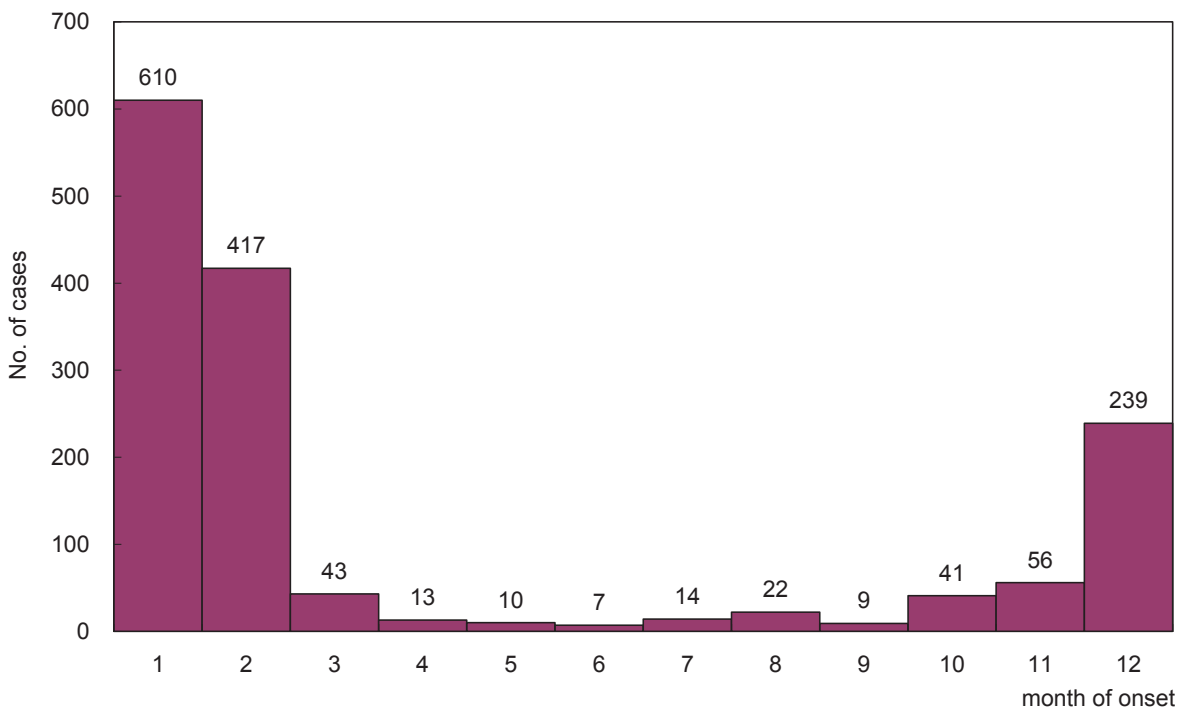


Figure 68 Number of Complicated Influenza confirmed cases, 2011

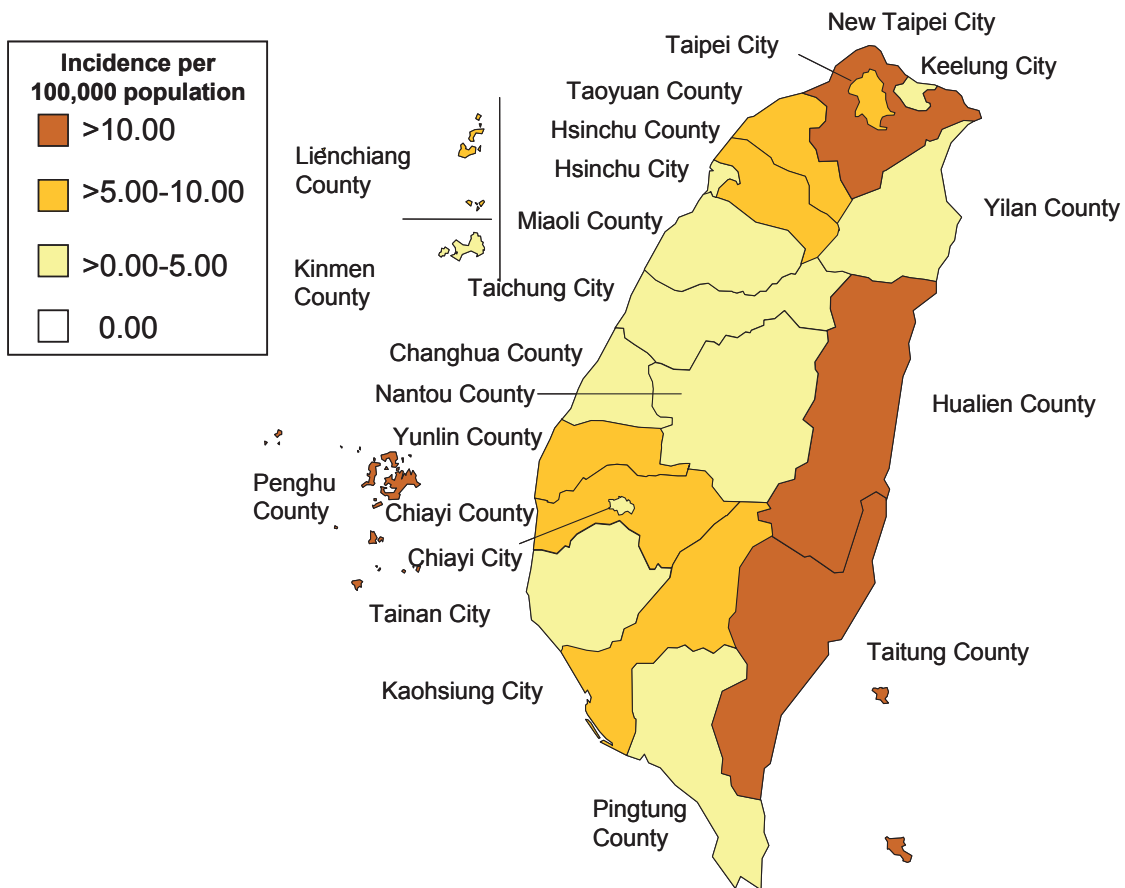


Figure 69 Geographical distributions by incidence of Complicated Influenza confirmed cases, 2011

Syphilis

In 2011, 6,372 cases of syphilis (incidence rate: 27.47 per 100,000 population) were confirmed, which showed a slight decline when compared with 6,482 confirmed cases (incidence rate: 28.01 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 4,628 male cases (72.6%) and 1,744 female cases (27.4%) with male to female ratio of 2.7:1.0.

(2) By age group

The cases occurred mostly in 40-64 years age group with 2,275 cases (35.7%), followed by 25-39 years age group with 1,933 cases (30.3%), 65 years and over age group with 1,401 cases (22.0%), 15-24 years age group with 736 cases (11.6%), 0-1 year age group with 24 cases (0.4%), and 5-14 years age group with 3 cases (<0.1%).

(3) By month (based on diagnosis date)

There were no specific prevalent months for syphilis incidence in 2011, and there were confirmed cases occurring in each month of the year.

(4) By residential region

New Taipei City had the highest number of incidents with 1,337 cases (21.0%), followed by Taipei City with 900 cases (14.1%), Kaohsiung City with 721 cases (11.3%), Taoyuan County with 700 cases (11.0%), Taichung City with 678 cases (10.6%), Tainan City with 364 cases (5.7%), Pingtung County with 278 cases (4.4%), Changhua County with 245 cases (3.8%), Yilan County with 169 cases (2.7%), Yunlin County with 141 cases (2.2%), Keelung City with 137 cases (2.2%), and Chiayi County with 105 cases (1.6%). The other cities and counties all had less than 100 cases.

The incidence rate of syphilis was the highest in Yilan County (36.76 per 100,000 population), followed by Keelung City (35.86 per 100,000 population), Taoyuan County (34.87 per 100,000 population), New Taipei City (34.22 per 100,000 population), Taipei City (34.16 per 100,000 population), and Pingtung County (31.99 per 100,000 population). The incidence rates of the other cities and counties were below 30.00 per 100,000 population.

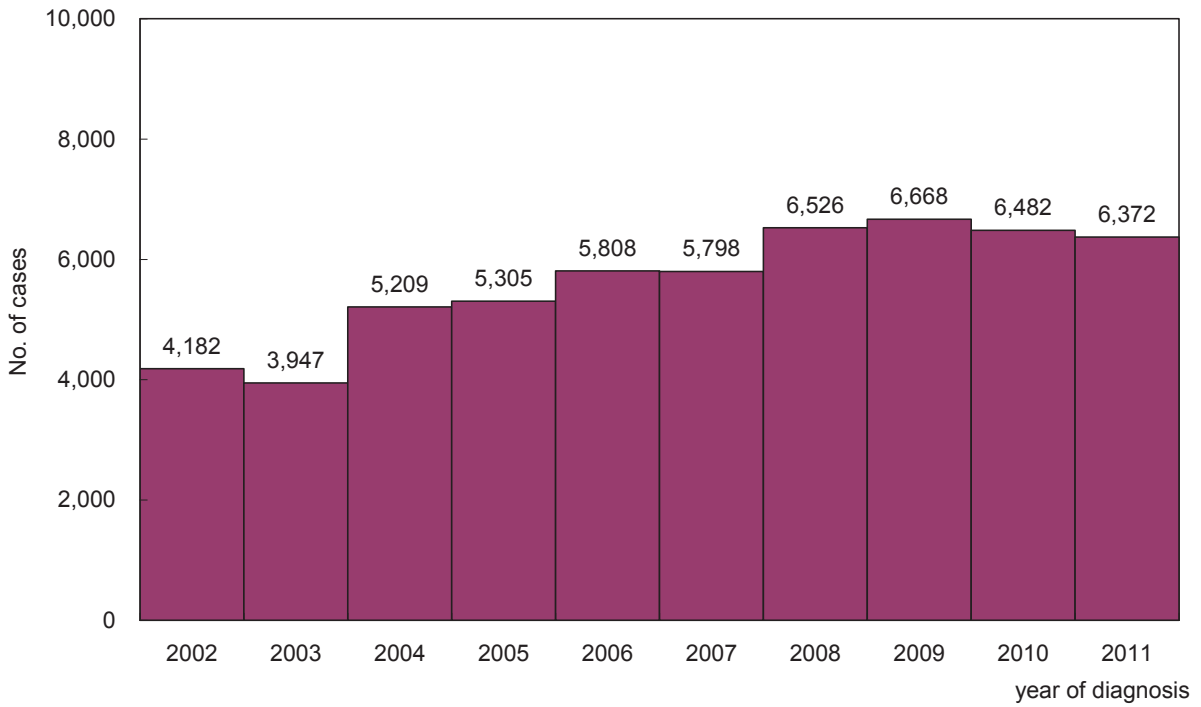


Figure 70 Number of Syphilis confirmed cases, 2002-2011

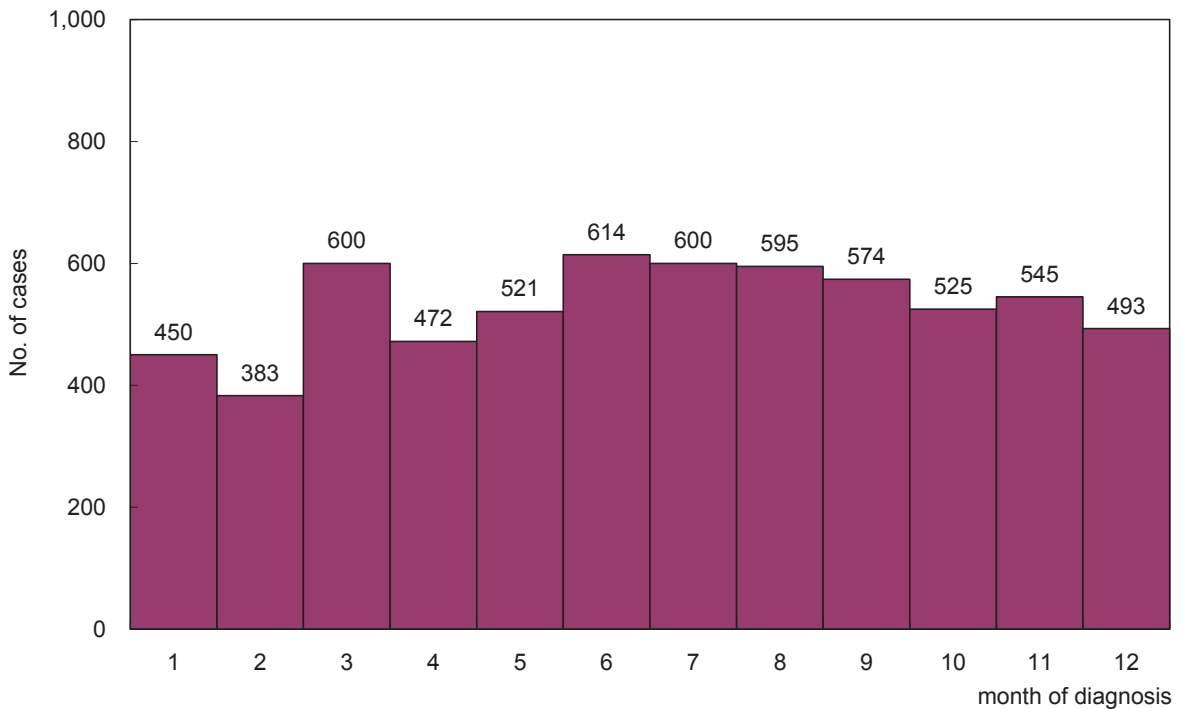


Figure 71 Number of Syphilis confirmed cases, 2011

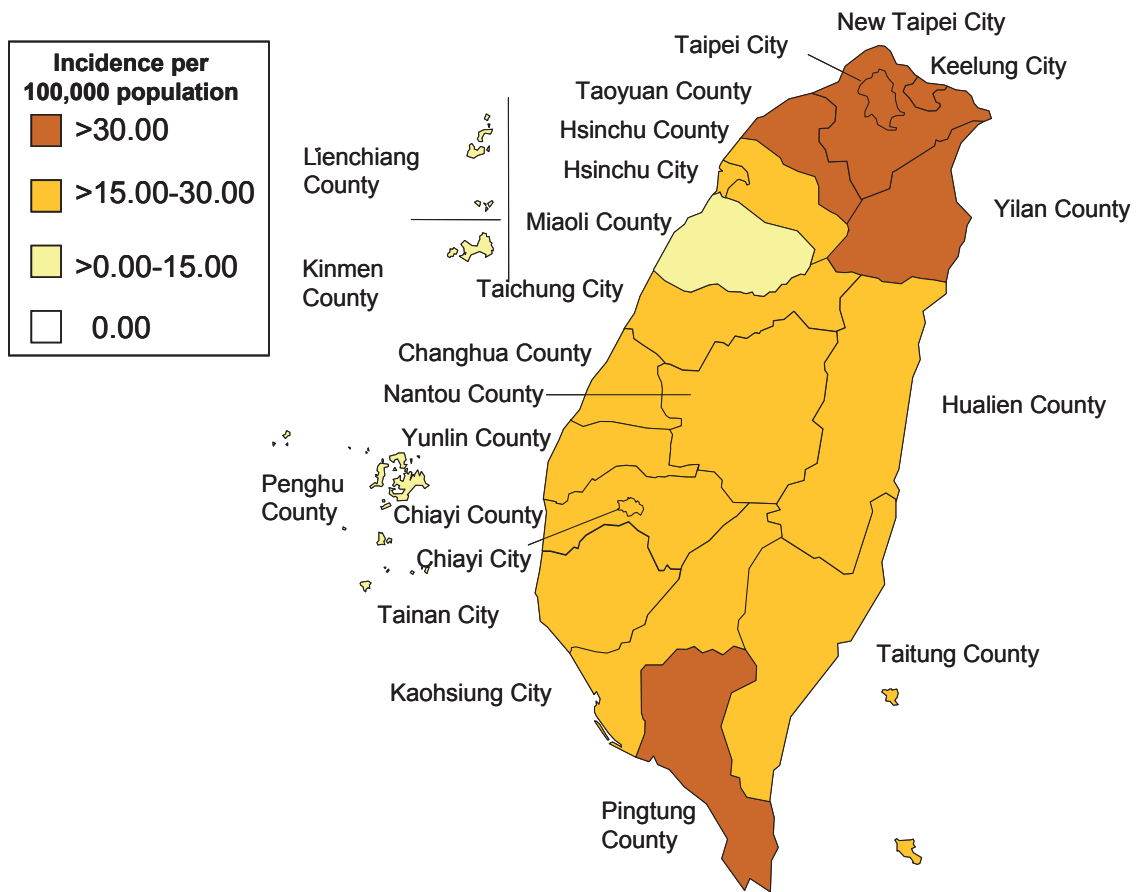


Figure 72 Geographical distribution by incidence of Syphilis confirmed cases, 2011

Gonorrhea

In 2011, 1,978 cases of gonorrhea (incidence rate: 8.53 per 100,000 population) were confirmed, which showed a decline when compared with 2,265 confirmed cases (incidence rate: 9.79 per 100,000 population) in 2010. The data of confirmed cases in 2011 were analyzed as follows:

(1) By gender

There were 1,834 male cases (92.7%) and 144 female cases (7.3%) with male to female ratio of 12.7:1.0

(2) By age group

The cases occurred mostly in 25-39 years age group with 1,110 cases (56.1%) confirmed, followed by 15-24 years age group with 549 cases (27.8%), 40-64 years age group with 296 cases (15.0%), 65 years and over age group with 17 cases (0.9%), and 5-14 years age group with 6 cases (0.3%).

(3) By month (based on diagnosis date)

There were no specific prevalent months for gonorrhea incidence in 2011, and there were confirmed cases occurring in each month of the year.

(4) By residential region

New Taipei City had the highest number of incidents with 549 cases (27.8%), followed by Taipei City with 464 cases (23.1%), Taoyuan County with 210 cases (10.6%), Taichung City with 123 cases (6.2%), Kaohsiung City with 93 cases (4.7%), Tainan City with 90 cases (4.6%), Keelung City with 79 cases (4.0%), Hsinchu County with 60 cases (3.0%), and Miaoli County with 50 cases (2.5%). The other cities and counties had less than 50 confirmed cases, in which Lienchiang County had no confirmed cases at all.

The incidence rate of gonorrhea was the highest in Keelung City (20.68 per 100,000 population), followed by Taipei City (17.61 per 100,000 population), New Taipei City (14.05 per 100,000 population), Hsinchu County (11.64 per 100,000 population) and Taoyuan County (10.46 per 100,000 population). The incidence rates of the other cities and counties were below 10.00 per 100,000 population.

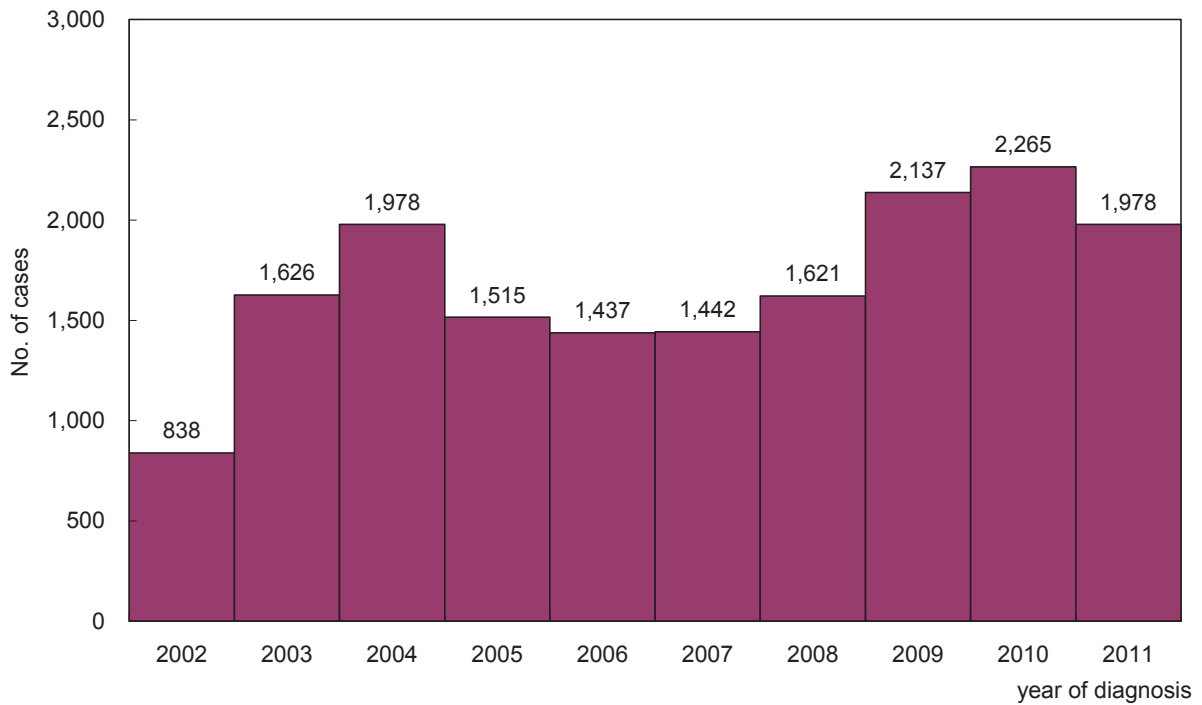


Figure 73 Number of Gonorrhoea confirmed cases, 2002-2011

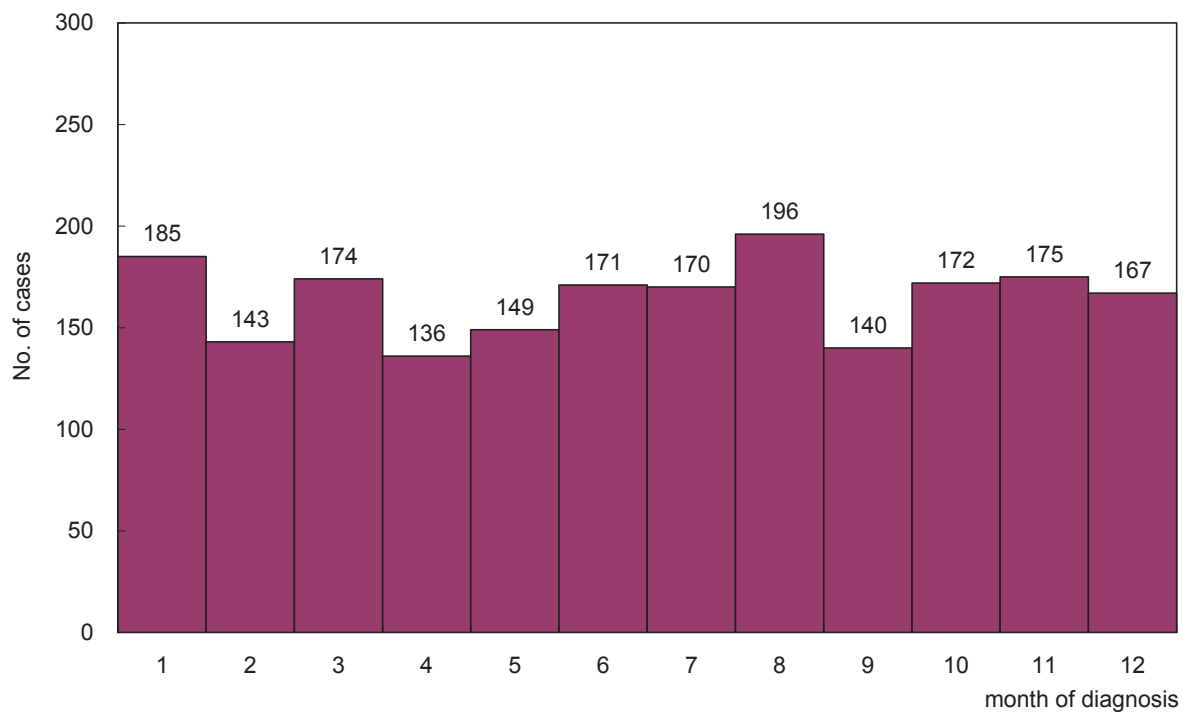


Figure 74 Number of Gonorrhoea confirmed cases, 2011

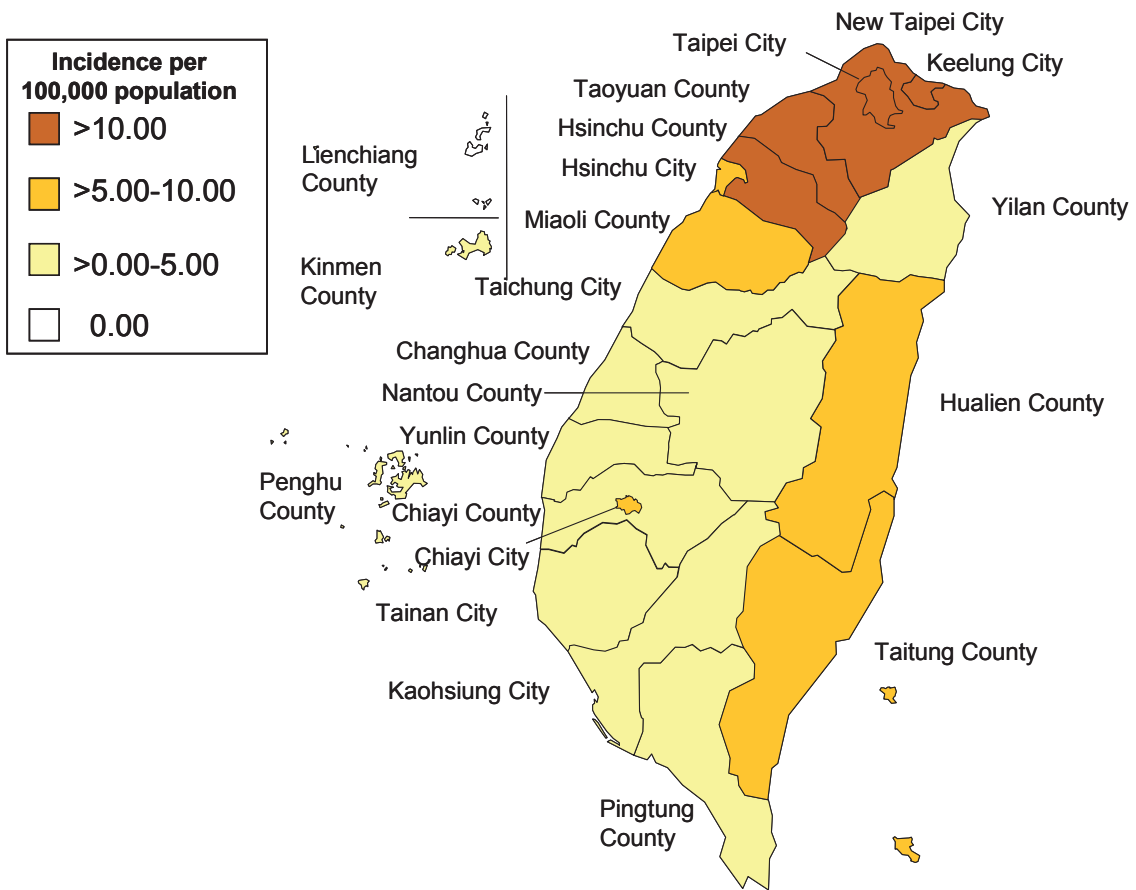


Figure 75 Geographical distribution by incidence of Gonorrhea confirmed cases, 2011

HIV Infection & AIDS

From 1984 up to the end of 2011, there were 22,822 cases of human immunodeficiency virus (HIV) infection (22,020 native cases and 802 foreign cases) and 8,512 AIDS cases (8,413 native cases and 99 foreign cases) were confirmed.

In 2011, 2,028 HIV cases (1,967 native cases and 61 foreign cases) and 1,086 AIDS cases (1,075 native cases and 11 foreign cases) were diagnosed and confirmed. The data of native cases in 2011 were analyzed as follows (the HIV infected cases included AIDS cases):

(1) By gender

HIV: There were 1,902 male cases (96.7%) and 65 female cases (3.3%) with male to female ratio of 29.3:1.0.

AIDS: There were 1,008 male cases (93.8%) and 67 female cases (6.2%) with male to female ratio of 15.0:1.0.

(2) By age group

HIV: There were 1,037 cases (52.7%) in 25-39 years age group, 541 cases (27.5%) in 15-24 years age group, and 367 cases (18.7%) in 40-64 years age group.

AIDS: There were 574 cases (53.4%) in 25-39 years age group, 377 cases (35.1%) in 40-64 years age group, and 101 cases (9.4%) 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 2011 and there were confirmed cases occurred in each month of the year.

(4) By risk factors

HIV (total): There were 1,421 cases (72.2%) caused by men who have sex with men, 334 cases (17.0%) caused by heterosexual, 99 cases (5.0%) caused by injection drug users, 2 cases (0.1%) caused by blood transfusion, and 111 cases (5.6%) with unknown causes.

HIV (male): There were 1,421 cases (74.7%) caused by men who have sex with men, 284 cases (14.9%) caused by heterosexual, 89 cases (4.7%) caused by injection drug users, 1 case (0.1%) caused by blood transfusion, and 107 cases (5.6%) with unknown causes.

HIV (female): The cases were mostly caused by heterosexual with 50 cases (76.9%), followed by injection drug users with 10 cases (15.4%) and blood transfusion with 1 case (1.5%). There were also 4 female cases (6.2%) with unknown causes.

AIDS (total): There were 584 cases (54.3%) caused by men who have sex with men, 233 cases (21.7%) caused by injection drug users, 218 cases (20.3%) caused by heterosexuals, 2 cases (0.2%) caused by blood transfusion, 1 case (0.1%) caused by vertical transmission, and 37 cases (3.4%) with unknown causes.

AIDS (male): There were 584 cases (57.9%) caused by men who have sex with men, 202

cases (20.0%) caused by injection drug users, 186 cases (18.5%) caused by heterosexuals, and 36 cases (3.6%) with unknown causes.

AIDS (female): There were 32 cases (47.8%) caused by heterosexuals, 31 cases (46.3%) caused by injection drug users, 2 cases (3.0%) caused by blood transfusion, 1 case (1.5%) caused by vertical transmission, and 1 cases (1.5%) with unknown causes.

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

(5) By residential region

HIV: New Taipei City had the highest number of incidents with 482 cases (24.5%) confirmed, followed by Taipei City with 335 cases (17.0%), Kaohsiung City with 298 cases (15.1%), Taichung City with 223 cases (11.3%), and Taoyuan County with 168 cases (8.5%).

The incidence rate of confirmed HIV cases per 100,000 population was the highest in Taipei City (12.71), followed by New Taipei City (12.34), and Kaohsiung City (10.74).

AIDS: New Taipei City had the highest number of incidents with 203 cases (18.9%) confirmed, followed by Kaohsiung City with 167 cases (15.5%), Taipei City with 142 cases (13.2%), Taichung City with 137 cases (12.7%), and Taoyuan County with 100 cases (9.3%). Lienchiang County did not have AIDS cases confirmed in 2011.

The incidence rate of confirmed AIDS cases per 100,000 population was the highest in Yunlin County (6.71), followed by Kaohsiung City (6.02) and Taipei City (5.39).

Table 28 Risk factor of HIV infection confirmed cases (foreigner excluded), 2011

Risk factor	Male	%	female	%	Total	%
Men who have sex with men	1,421	74.7%	0	0.0%	1,421	72.2%
Heterosexuals	284	14.9%	50	76.9%	334	17.0%
Injecting drug users	89	4.7%	10	15.4%	99	5.0%
Blood recipients	1	0.1%	1	1.5%	2	0.1%
Vertical transmission	0	0.0%	0	0.0%	0	0.0%
Hemophiliacs	0	0.0%	0	0.0%	0	0.0%
Unknown	107	5.6%	4	6.2%	111	5.6%
Total	1,902	100.0%	65	100.0%	1,967	100.0%

Table 29 Risk factor of AIDS confirmed cases (foreigner excluded), 2011

Risk factor	Male	%	female	%	Total	%
Men who have sex with men	584	57.9%	0	0.0%	584	54.3%
Heterosexuals	186	18.5%	32	47.8%	218	20.3%
Injecting drug users	202	20.0%	31	46.3%	233	21.7%
Blood recipients	0	0.0%	2	3.0%	2	0.2%
Vertical transmission	0	0.0%	1	1.5%	1	0.1%
Hemophiliacs	0	0.0%	0	0.0%	0	0.0%
Unknown	36	3.6%	1	1.5%	37	3.4%
Total	1,008	100.0%	67	100.0%	1,075	100.0%

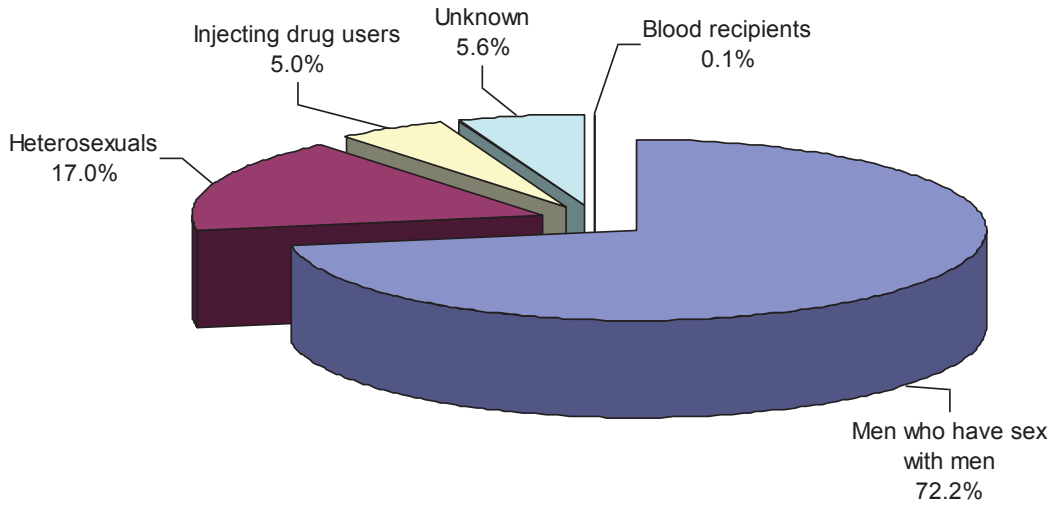


Figure 76 Risk factor of HIV infection confirmed cases (foreigner excluded), 2011

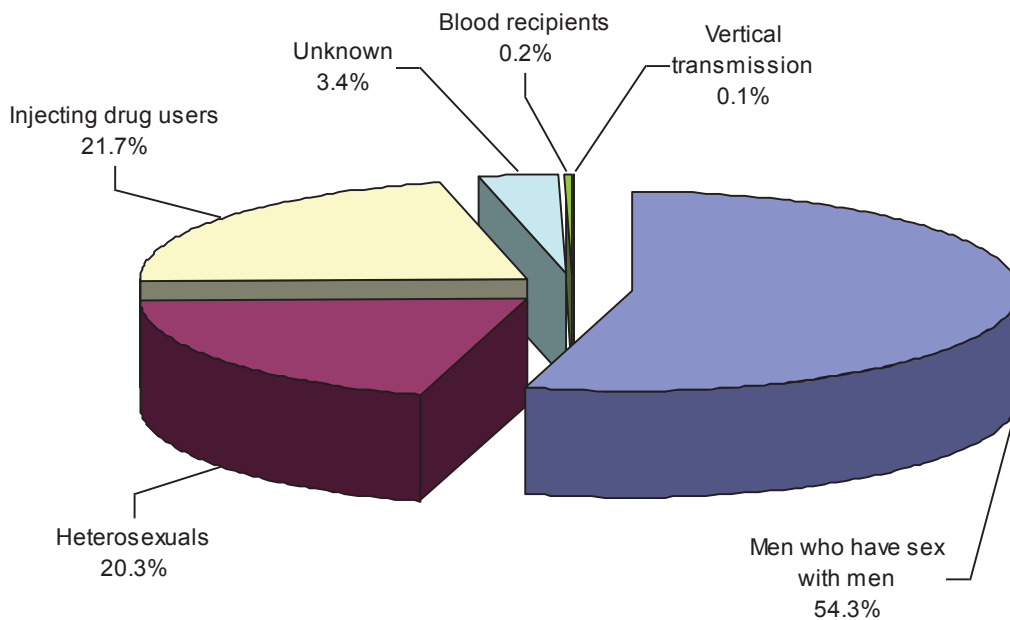


Figure 77 Risk factor of AIDS confirmed cases (foreigner excluded), 2011

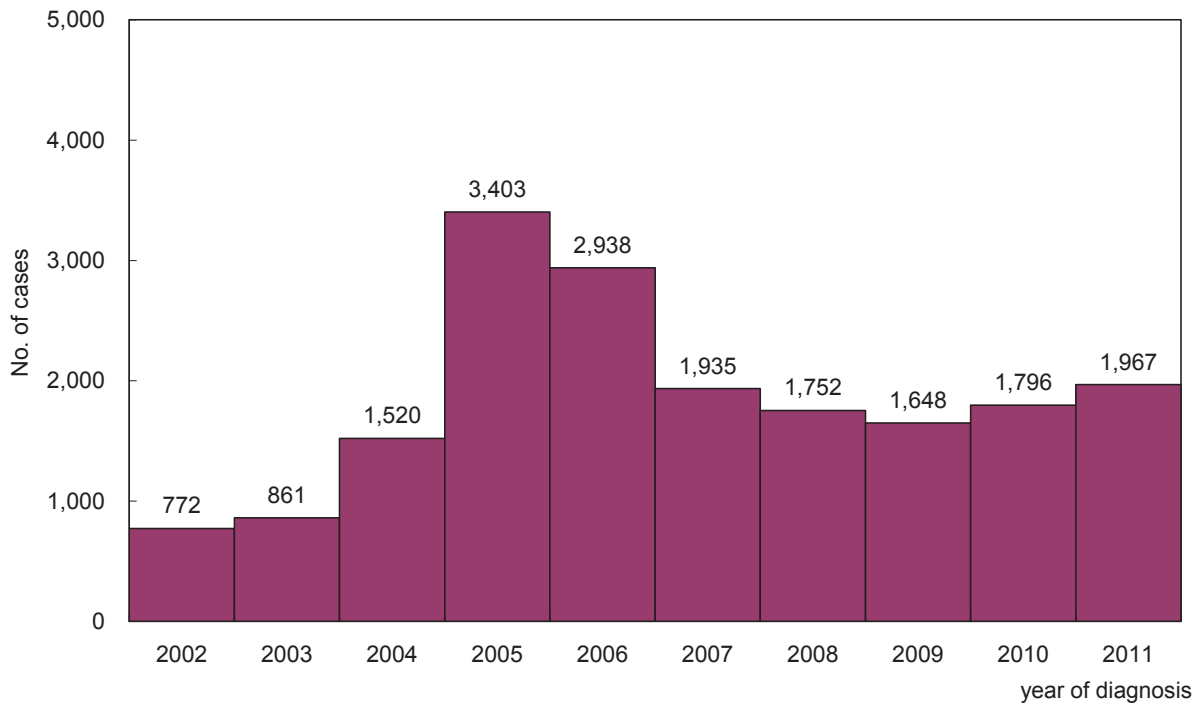


Figure 78 Number of HIV infection confirmed cases (foreigner excluded), 2002-2011

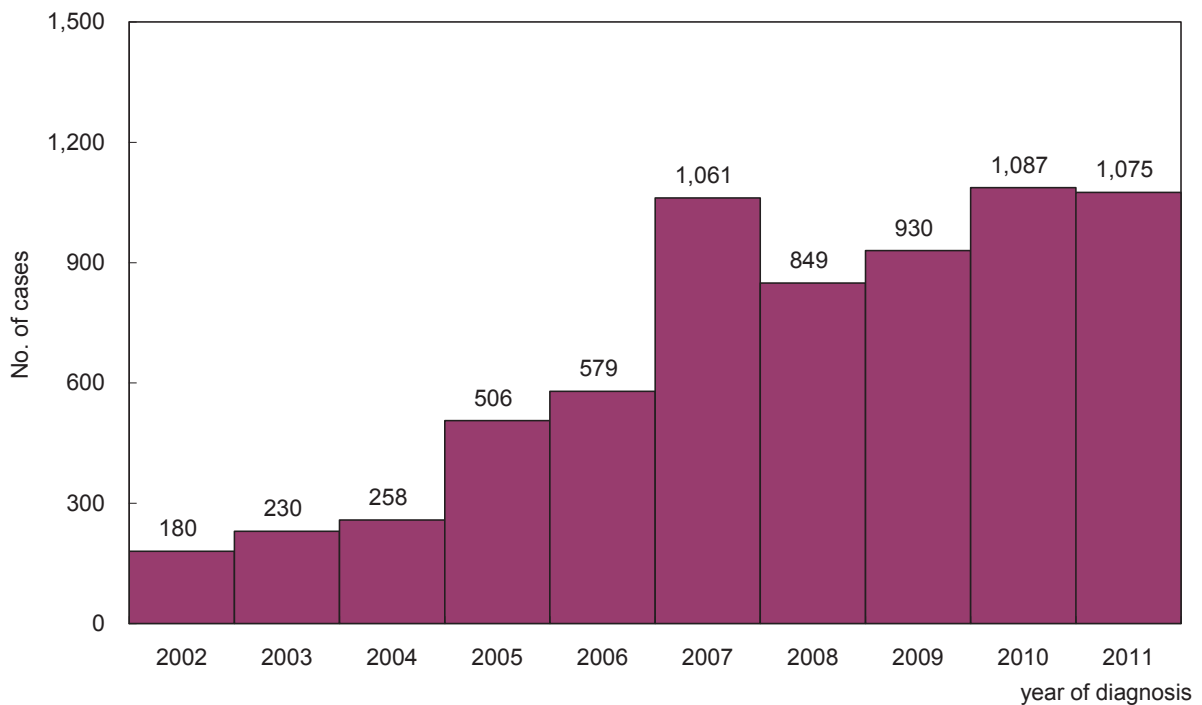


Figure 79 Number of AIDS confirmed cases (foreigner excluded), 2002-2011

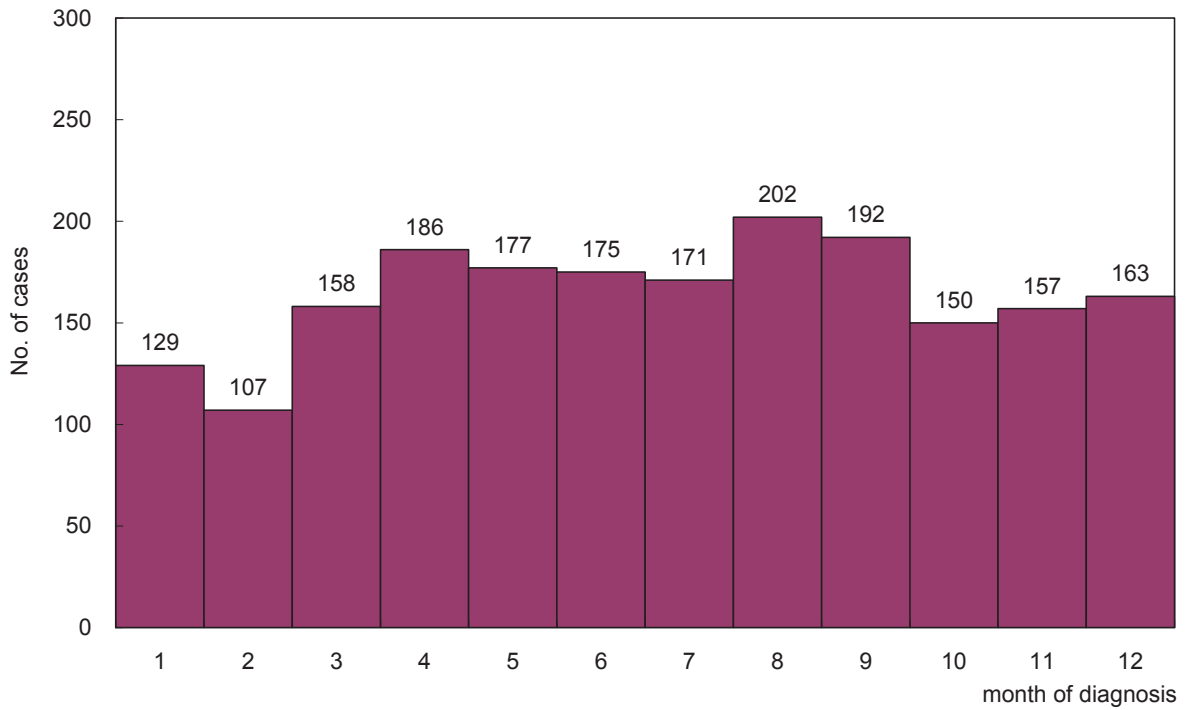


Figure 80 Number of HIV infection confirmed cases (foreigner excluded), 2011

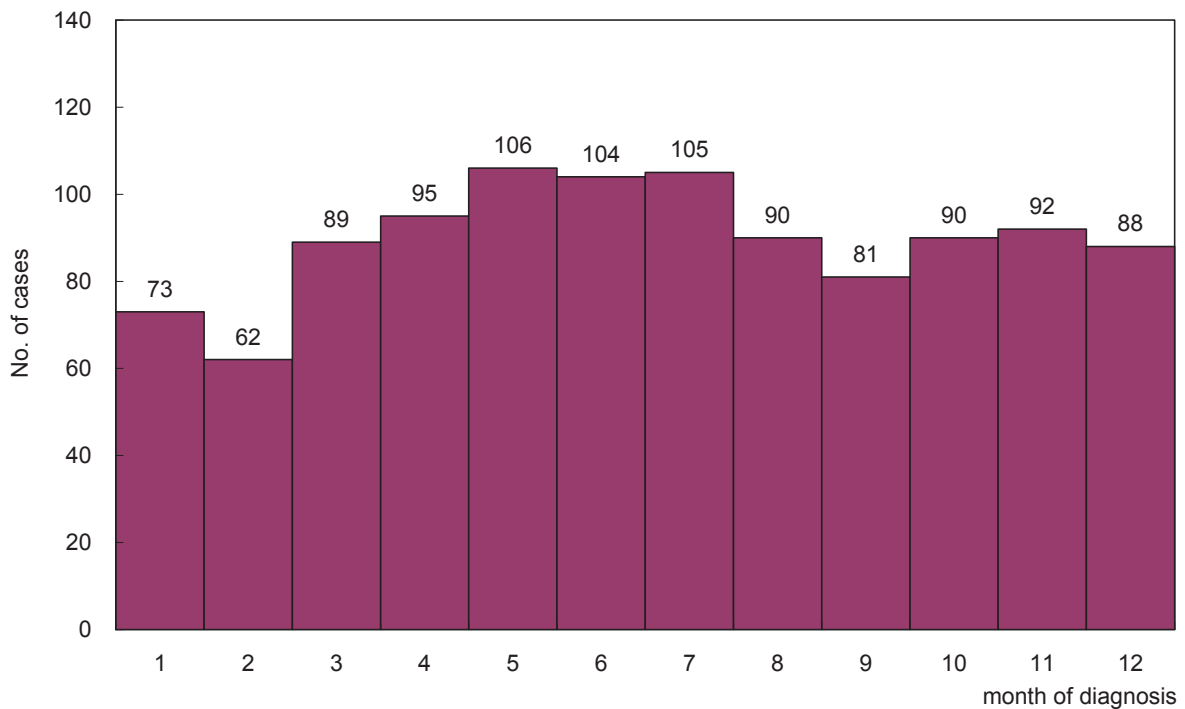


Figure 81 Number of AIDS confirmed cases (foreigner excluded), 2011

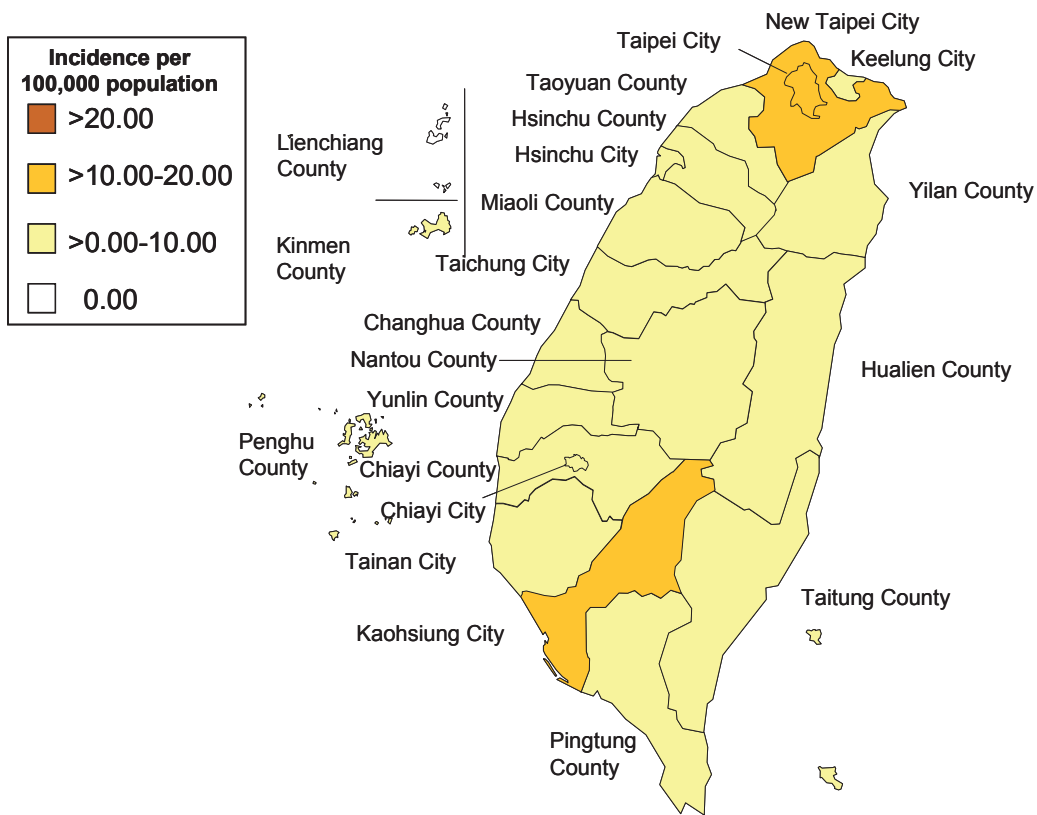


Figure 82 Geographical distribution by incidence of HIV infection confirmed cases (foreigner excluded), 2011

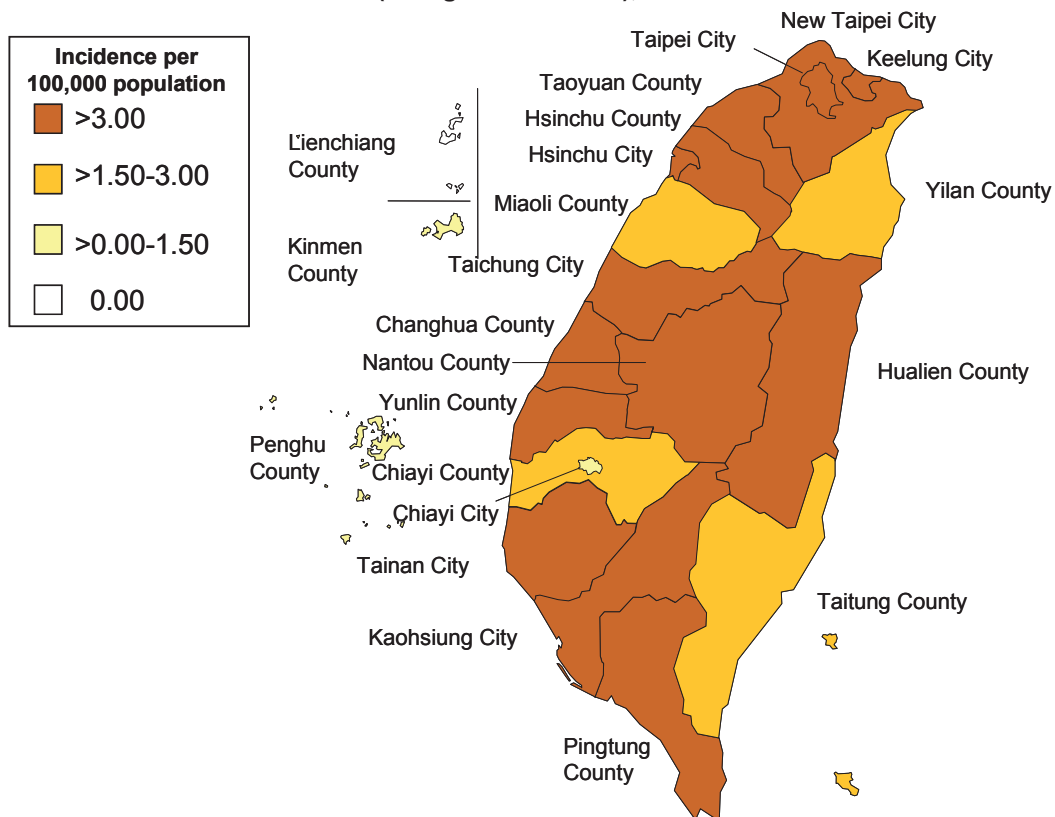


Figure 83 Geographical distribution by incidence of AIDS confirmed cases (foreigner excluded), 2011

Tuberculosis

In 2011, 12,634 cases of tuberculosis (incidence rate: 54.5 per 100,000 population) were confirmed, which went down in both case number and incidence rate as compared with 13,237 confirmed cases (incidence rate: 57.2 per 100,000 population) in 2010. Incident case number decreased 4.6% and rate decreased 4.8%. The data of confirmed TB cases in 2011 were analyzed as follows:

(1) By gender

There were 8,781 male cases (69.5%) and 3,853 female cases (30.5%) with male to female ratio of 2.3:1.0. The incidence rate of tuberculosis in men was 75.4 per 100,000 population and that in women was 33.4. Men's incidence rate was also 2.3 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 77 cases in 0-14 years age group, 648 cases in 15-24 years age group, 818 cases in 25-34 years age group, 999 cases in 35-44 years age group, 1,586 cases in 45-54 years age group, 1,897 cases in 55-64 years age group, and 6,609 (52.3%) 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 (1,215 cases) in May and lowest number (794 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, Pingtung County had the highest incidence rate with 97.5 per 100,000 population, followed by Taitung County with 97.2 per 100,000 population. Penghu County and Kinmen County had the lowest incidence rate with 18.5 and 17.9 per 100,000 population respectively.

(5) Mortality distribution

In 2011 there were 638 tuberculosis deaths with mortality rate 2.8 per 100,000 population, including 479 male death cases and 159 female death cases. The male to female death ratio was 3.0:1.0. The male mortality rate was 4.1 cases per 100,000 population and the female mortality rate was 1.4.

By age group, tuberculosis mortality rate increased as age increased. Of the 638 tuberculosis deaths in 2011, 85.6% (546 cases) were elderly aged 65 years and over.

By area, the tuberculosis mortality rate was the highest in Lienchiang County with 10.0 cases

per 100,000 population, followed by Taitung County (7.4 cases per 100,000 population) and Pingtung County (6.2 cases per 100,000 population). Overall distribution of tuberculosis deaths in 2011 exhibited a pattern of higher in the east and south and lower in the north.

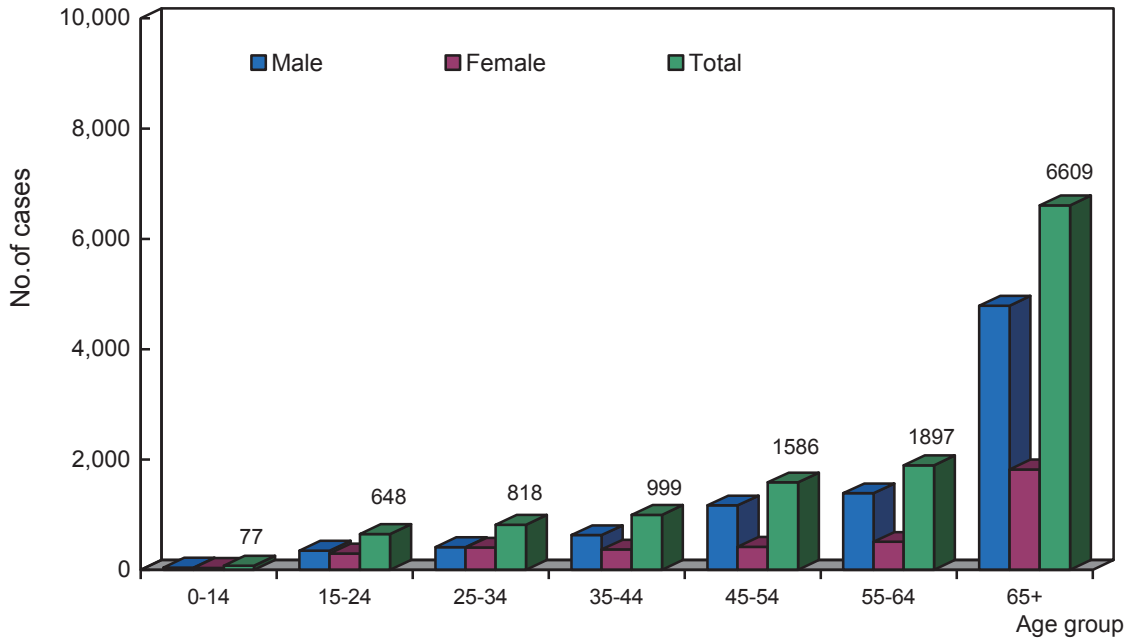


Figure 84 Tuberculosis cases number by age group and sex, 2011

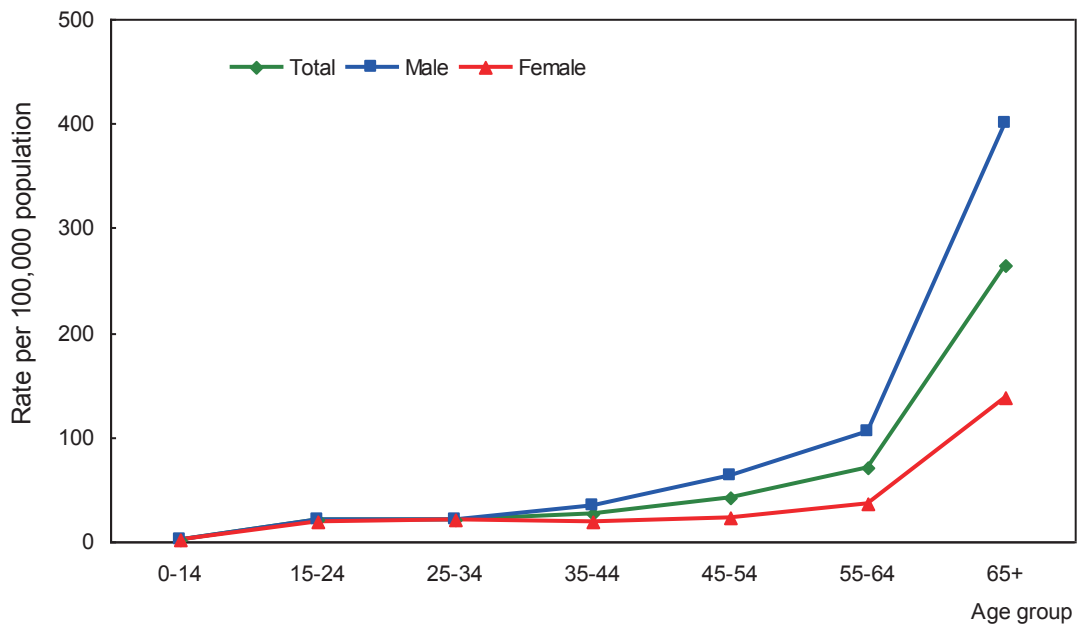


Figure 85 Incidence rate of Tuberculosis by age group and sex, 2011

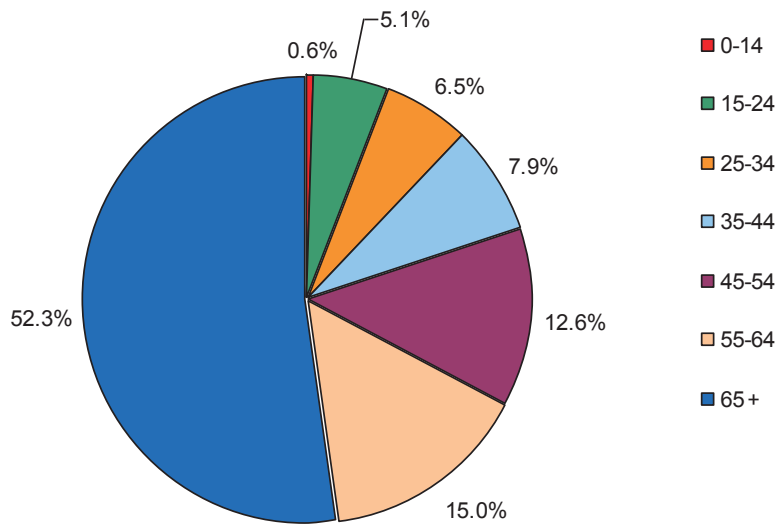


Figure 86 Distribution of Tuberculosis incidence by age group, 2011

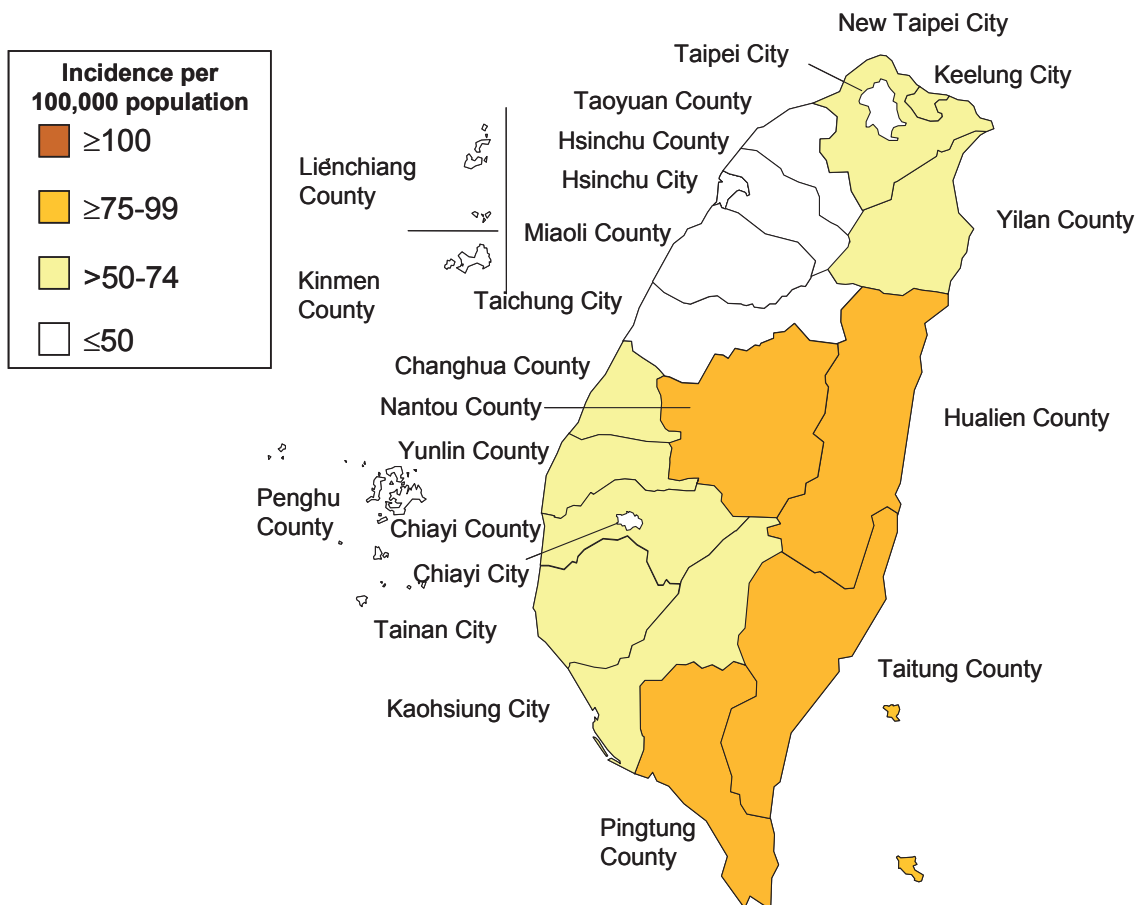


Figure 87 Geographical distribution by incidence of Tuberculosis cases, 2011

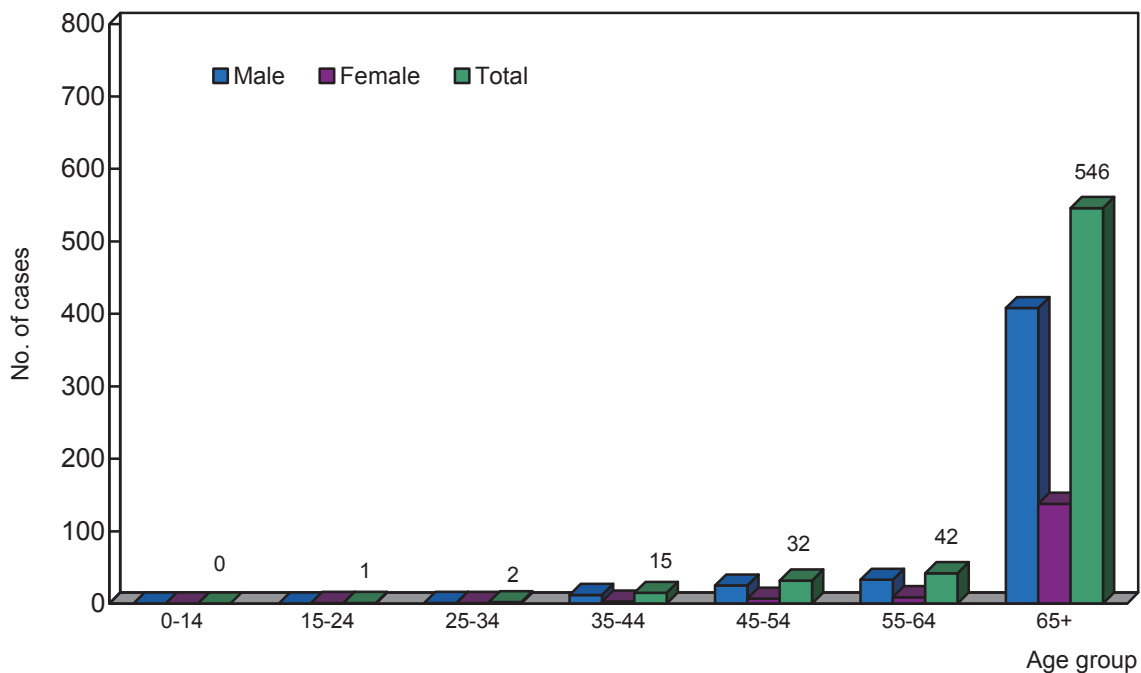


Figure 88 Mortality number of Tuberculosis by age group and sex, 2011

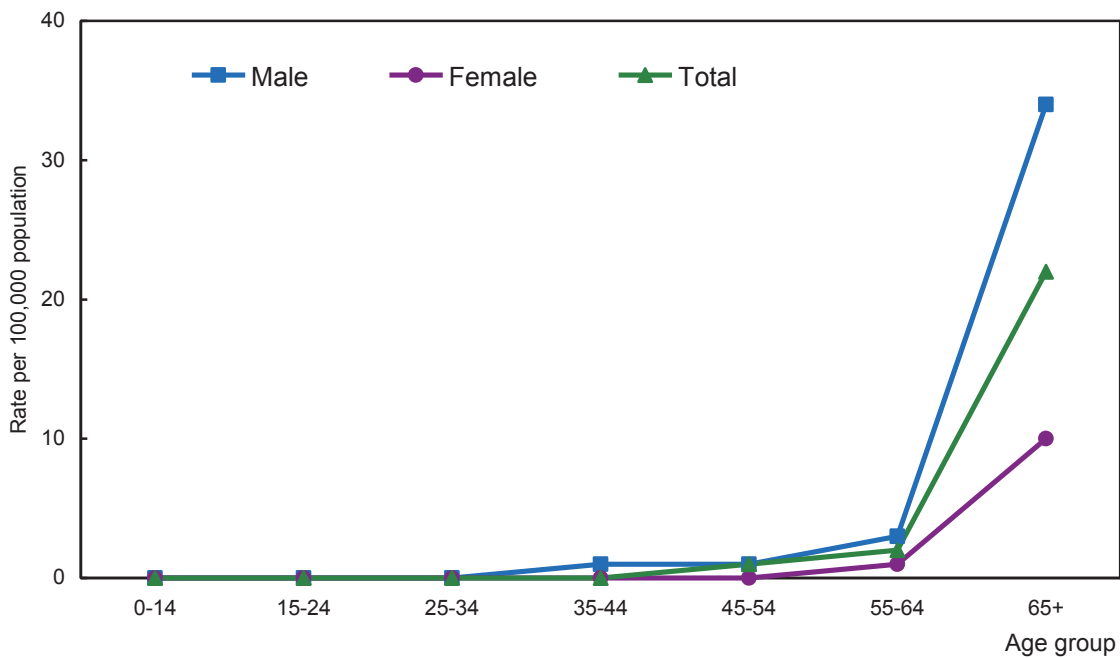


Figure 89 Mortality rate of Tuberculosis by age group and sex, 2011

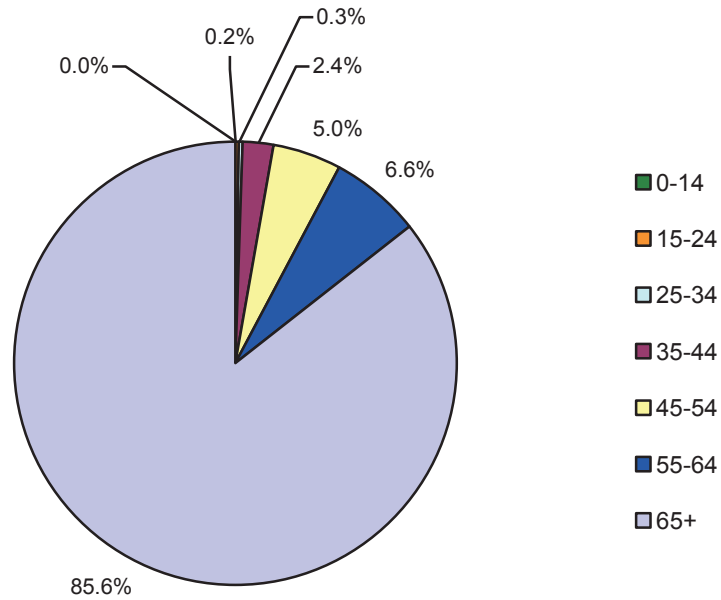


Figure 90 Distribution of Tuberculosis mortality by age group, 2011

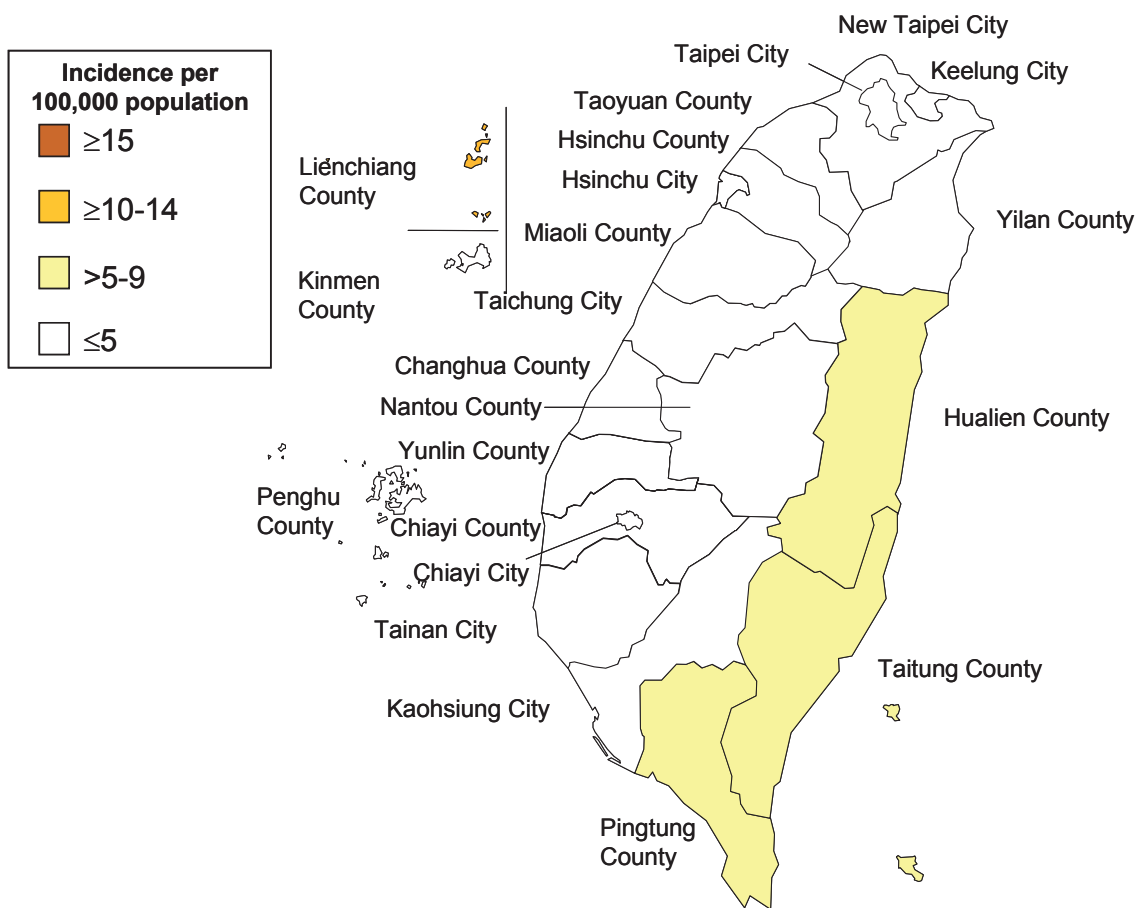


Figure 91 Geographical distribution by mortality of confirmed Tuberculosis cases, 2011

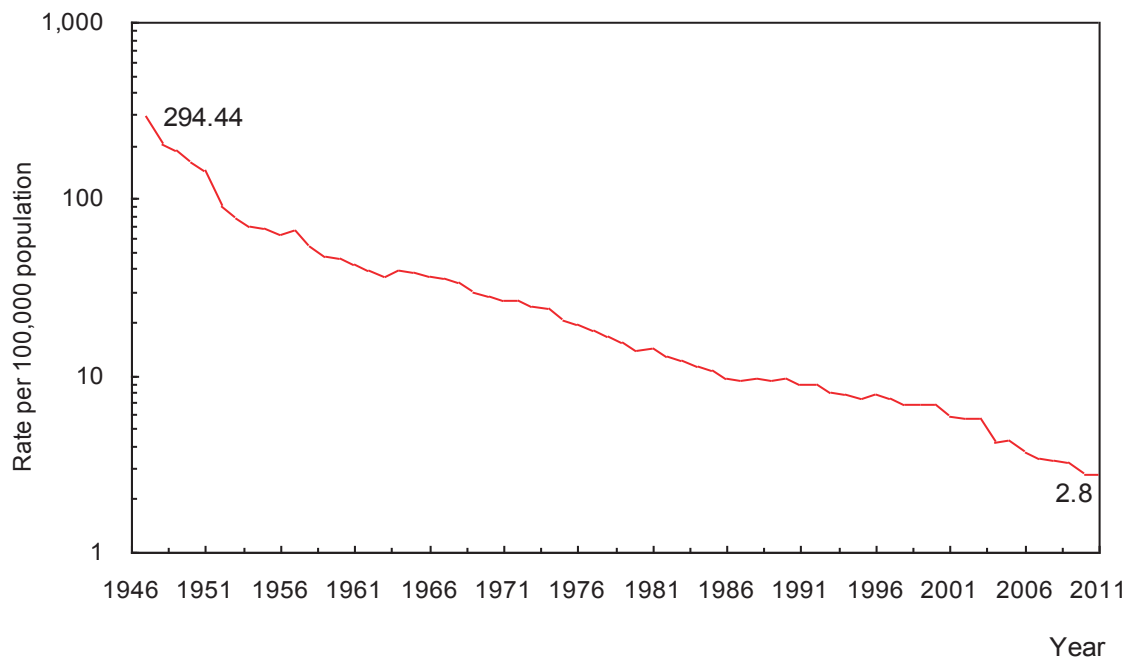


Figure 92 Trend of Tuberculosis mortality rate by year

Table 30 Mortality of Tuberculosis — by geographical distribution, 2011

Locality	Midyear population	Death number from TB	Per 100,000 population
Taiwan	23,193,518	638	2.8
New Taipei City	3,906,909	74	1.9
Yilan County	459,774	7	1.5
Taoyuan County	2,007,682	44	2.2
Hsinchu County	515,328	9	1.7
Miaoli County	561,489	7	1.2
Changhua County	1,305,163	51	3.9
Nantou County	524,649	20	3.8
Yunlin County	715,604	31	4.3
Chiayi County	540,595	26	4.8
Pingtung County	869,019	54	6.2
Taitung County	229,481	17	7.4
Hualien County	337,822	19	5.6
Penghu County	97,038	1	1.0
Keelung City	382,030	8	2.1
Hsinchu City	417,698	10	2.4
Taichung City	2,656,406	51	1.9
Chiayi City	271,958	3	1.1
Tainan City	1,875,377	51	2.7
Taipei City	2,634,870	52	2.0
Kaohsiung City	2,773,977	101	3.6
Kinmen County	100,623	1	1.0
Lienchiang County	10,026	1	10.0

Table 31 Mortality of Tuberculosis—by age & sex, 2011

Age	Tuberculosis				Male			Female		
	Midyear population	Death number	Per 100,000 population	Death number	Midyear population	Death number	Per 100,000 population	Midyear population	Death number	Per 100,000 population
Total	23,193,518	638	2.8	479	11,640,450	479	4.1	11,553,068	159	1.4
0-4	960,542	-	0.0	-	501,073	-	0.0	459,469	-	0.0
5-9	1,133,345	-	0.0	-	592,505	-	0.0	540,840	-	0.0
10-14	1,469,164	-	0.0	-	765,644	-	0.0	703,520	-	0.0
15-19	1,610,195	1	0.1	-	837,274	-	0.0	772,921	1	0.1
20-24	1,595,370	-	0.0	-	827,000	-	0.0	768,370	-	0.0
25-29	1,832,769	1	0.1	-	926,636	-	0.0	906,133	1	0.1
30-34	2,026,088	1	0.0	1	1,009,993	1	0.1	1,016,095	-	0.0
35-39	1,818,147	5	0.3	4	901,982	4	0.4	916,165	1	0.1
40-44	1,852,252	10	0.5	8	925,783	8	0.9	926,469	2	0.2
45-49	1,905,303	11	0.6	8	951,833	8	0.8	953,470	3	0.3
50-54	1,790,649	21	1.2	17	888,665	17	1.9	901,984	4	0.4
55-59	1,590,322	26	1.6	20	782,165	20	2.6	808,157	6	0.7
60-64	1,101,301	16	1.5	13	536,367	13	2.4	564,934	3	0.5
65+	2,508,071	546	21.8	408	1,193,530	408	34.2	1,314,541	138	10.5

Table 32 Confirmed tuberculosis cases—by geographical distribution, 2011

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	4,559	8,075	12,634	23,193,518	54.5	3,370	5,411	8,781	11,640,450	75.4	1,189	2,664	3,853	11,553,068	33.4
New Taipei City	681	1,328	2,009	3,906,909	51.4	509	848	1,357	1,937,756	70.0	172	480	652	1,969,153	33.1
Yilan County	101	170	271	459,774	58.9	83	119	202	234,172	86.3	18	51	69	225,602	30.6
Taoyuan County	302	577	879	2,007,682	43.8	224	424	648	1,011,446	64.1	78	153	231	996,236	23.2
Hsinchu County	72	136	208	515,328	40.4	63	88	151	264,959	57.0	9	48	57	250,369	22.8
Miaoli County	70	117	187	561,489	33.3	52	77	129	291,198	44.3	18	40	58	270,291	21.5
Changhua County	303	477	780	1,305,163	59.8	218	304	522	669,366	78.0	85	173	258	635,797	40.6
Nantou County	166	246	412	524,649	78.5	123	174	297	270,016	110.0	43	72	115	254,633	45.2
Yunlin County	194	304	498	715,604	69.6	121	201	322	373,555	86.2	73	103	176	342,049	51.5
Chiayi County	145	226	371	540,595	68.6	119	159	278	281,850	98.6	26	67	93	258,745	35.9
Pingtung County	326	521	847	869,019	97.5	250	346	596	446,700	133.4	76	175	251	422,319	59.4
Taitung County	102	121	223	229,481	97.2	85	82	167	119,976	139.2	17	39	56	109,505	51.1
Hualien County	114	163	277	337,822	82.0	81	107	188	173,895	108.1	33	56	89	163,927	54.3
Penghu County	10	8	18	97,038	18.5	8	7	15	49,817	30.1	2	1	3	47,221	6.4
Keelung City	78	142	220	382,030	57.6	58	91	149	192,470	77.4	20	51	71	189,560	37.5
Hsinchu City	35	94	129	417,698	30.9	28	62	90	207,316	43.4	7	32	39	210,382	18.5
Taichung City	381	845	1,226	2,656,406	46.2	267	582	849	1,322,025	64.2	114	263	377	1,334,381	28.3
Chiayi City	44	82	126	271,958	46.3	34	43	77	133,744	57.6	10	39	49	138,214	35.5
Tainan City	343	640	983	1,875,377	52.4	256	451	707	943,971	74.9	87	189	276	931,406	29.6
Taipei City	343	657	1,000	2,634,870	38.0	242	422	664	1,269,449	52.3	101	235	336	1,365,421	24.6
Kaohsiung City	741	1,208	1,949	2,773,977	70.3	544	812	1,356	1,389,729	97.6	197	396	593	1,384,248	42.8
Kinmen County	8	10	18	100,623	17.9	5	9	14	51,251	27.3	3	1	4	49,372	8.1
Lienchiang County	-	3	3	10,026	29.9	-	3	3	5,789	51.8	-	-	-	4,237	0.0

Table 33 Confirmed tuberculosis cases—by age & sex, 2011

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	4,559	8,075	12,634	23,193,518	54.5	3,370	5,411	8,781	11,640,450	75.4	1,189	2,664	3,853	11,553,068	33.4			
0-4	1	12	13	960,542	1.4	1	7	8	501,073	1.6	-	5	5	459,469	1.1			
5-9	-	16	16	1,133,345	1.4	-	7	7	592,505	1.2	-	9	9	540,840	1.7			
10-14	10	38	48	1,469,164	3.3	4	22	26	765,644	3.4	6	16	22	703,520	3.1			
15-19	73	208	281	1,610,195	17.5	43	110	153	837,274	18.3	30	98	128	772,921	16.6			
20-24	94	273	367	1,595,370	23.0	57	140	197	827,000	23.8	37	133	170	768,370	22.1			
25-29	116	250	366	1,832,769	20.0	57	124	181	926,636	19.5	59	126	185	906,133	20.4			
30-34	147	305	452	2,026,088	22.3	82	151	233	1,009,993	23.1	65	154	219	1,016,095	21.6			
35-39	163	297	460	1,818,147	25.3	102	174	276	901,982	30.6	61	123	184	916,165	20.1			
40-44	228	311	539	1,852,252	29.1	155	199	354	925,783	38.2	73	112	185	926,469	20.0			
45-49	302	426	728	1,905,303	38.2	234	285	519	951,833	54.5	68	141	209	953,470	21.9			
50-54	380	478	858	1,790,649	47.9	319	331	650	888,665	73.1	61	147	208	901,984	23.1			
55-59	403	582	985	1,590,322	61.9	306	389	695	782,165	88.9	97	193	290	808,157	35.9			
60-64	353	559	912	1,101,301	82.8	282	412	694	536,367	129.4	71	147	218	564,934	38.6			
65+	2,289	4,320	6,609	2,508,071	263.5	1,728	3,060	4,788	1,193,530	401.2	561	1,260	1,821	1,314,541	138.5			

Table 34 Confirmed tuberculosis cases—by aboriginal locality / township, 2011

Locality	Township	Smear-positive	Others	Total	Midyear population	Per 100,000 population
Total		205	250	455	200,365	227.1
Kaohsiung City	Maolin District	4	1	5	1,854	269.7
Yilan County	Nanao Township	10	14	24	5,969	402.1
Hualien County	Sioulin Township	30	35	65	15,209	427.4
Nantou County	Renai Township	31	37	68	15,628	435.1
Taitung County	Yanping Township	3	-	3	3,580	83.8
Yilan County	Datong Township	3	7	10	5,959	167.8
Hualien County	Wanrong Township	6	10	16	6,806	235.1
Hualien County	Jhuosi Township	5	11	16	6,291	254.3
Hsinchu County	Jianshih Township	8	7	15	8,585	174.7
Pingtung County	Sandimen Township	8	6	14	7,560	185.2
Pingtung County	Shihzih Township	2	5	7	4,844	144.5
Pingtung County	Majia Township	5	4	9	6,547	137.5
Taitung County	Haiduan Township	6	5	11	4,459	246.7
Hsinchu County	Wufong Township	2	8	10	4,640	215.5
Kaohsiung City	Taoyuan District	6	11	17	4,759	357.2
Taoyuan County	Fusing Township	13	18	31	10,677	290.3
Chiayi County	Alishan Township	6	4	10	6,192	161.5
Taichung City	Heping District	7	10	17	10,713	158.7
Nantou County	Sinyi Township	22	19	41	17,187	238.6
Miaoli County	Taian Township	4	3	7	5,965	117.4
New Taipei City	Wulai District	1	6	7	5,869	119.3
Taitung County	Jinfong Township	1	5	6	3,539	169.5
Pingtung County	Layi Township	5	5	10	7,726	129.4
Taitung County	Daren Township	3	3	6	4,030	148.9
Pingtung County	Chunrih Township	3	7	10	4,831	207.0
Pingtung County	Taiwu Township	4	2	6	5,094	117.8
Kaohsiung City	Namasia District	1	3	4	3,327	120.2
Pingtung County	Mudan Township	3	2	5	4,958	100.8
Pingtung County	Wutai Township	-	2	2	2,972	67.3
Taitung County	Lanyu Township	3	-	3	4,595	65.3



IV

Appendix

©Abbreviations and Symbols Used in Table

- No reported cases.
- ... Not under surveillance.

Appendix 1

List of cases number update

Year	Acute Hapatitis B		Acute Hepatitis E		Mumps		Hansen's Disease	
	reported	confirmed	reported	confirmed	reported	confirmed	reported	confirmed
2002	417	417	13	12	665	-	8	8
2003	334	327	12	11	676	-	9	9
2004	379	378	36	18	1,081	-	9	9

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

Year	Varicella		HIV Infection		AIDS	
	reported	confirmed	reported	confirmed	reported	confirmed
2002	13,073	-	772	772	180	180
2003	12,273	-	861	861	230	230
2004	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 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 <i>E. coli</i> 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, Gonorrhoea, Enteroviruses Infection with Severe Complications, Hansen'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、8
	Invasive Pneumococcal Disease, Q Fever, Endemic Typhus Fever, Lyme Disease, Tularemia, Scrub Typhus, Varicella, Cat-Scratch Disease, Toxoplasmosis, Complicated Influenza	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.
8. According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1000100896 dated September 16, 2011, Class 4 Notifiable Communicable Disease "Severe Complicated Influenza Case" is changed name to "Complicated Influenza."

Appendix 3

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

Please protect patient's privacy

2011/09/16

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

I. The Patient	Name	Sex	<input type="checkbox"/> Male <input type="checkbox"/> Female	Date of Birth	(Y) (M) (D)	I.D. Number / Passport Number												
	Nationality	<input type="checkbox"/> National <input type="checkbox"/> Other _____		Tel	Office											Marital Status	<input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced	
	Residence : <input type="checkbox"/> Alien Labor <input type="checkbox"/> Alien Identity : <input type="checkbox"/> Mainland Chinese <input type="checkbox"/> Alien Bride <input type="checkbox"/> Mainland Bride		Home															
Address		Occupation			Animal contact (within 3 months) <input type="checkbox"/> No <input type="checkbox"/> Yes													
II. Medical Record and Date	Medical Record No.	Date of Onset			(Y) (M) (D)	Travel history (within 3 months) <input type="checkbox"/> No <input type="checkbox"/> Yes, place : _____												
	Major Symptoms	Date of Diagnosis			(Y) (M) (D)	From : (Y) (M) (D) To : (Y) (M) (D)												
	Hospital Care	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Referred (Date: _____)	Hospital/Clinic		Specimen Collection	<input type="checkbox"/> Yes <input type="checkbox"/> 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				Category III Communicable Diseases										Category IV Communicable Diseases			
	<input type="checkbox"/> Smallpox <input type="checkbox"/> Plague <input type="checkbox"/> Severe Acute Respiratory Syndrome <input type="checkbox"/> Rabies <input type="checkbox"/> Anthrax <input type="checkbox"/> H5N1 Influenza Category II Communicable Diseases <input type="checkbox"/> Diphtheria <input type="checkbox"/> Typhoid Fever <input type="checkbox"/> Dengue Fever <input type="checkbox"/> Dengue Hemorrhagic Fever / Dengue Shock Syndrome <input type="checkbox"/> Meningococcal Meningitis <input type="checkbox"/> Paratyphoid Fever <input type="checkbox"/> Poliomyelitis <input type="checkbox"/> Acute Flaccid Paralysis <input type="checkbox"/> Shigellosis <input type="checkbox"/> Amoebiasis <input type="checkbox"/> Malaria <input type="checkbox"/> Measles <input type="checkbox"/> Acute Hepatitis A <input type="checkbox"/> EHEC (Enterohaemorrhagic <i>E. coli</i>) Infection Hantavirus Syndrome <input type="checkbox"/> Hemorrhagic Fever with Renal Syndrome <input type="checkbox"/> Hantavirus Pulmonary Syndrome <input type="checkbox"/> Cholera <input type="checkbox"/> Rubella <input type="checkbox"/> MDR-TB <input type="checkbox"/> Chikungunya Fever <input type="checkbox"/> West Nile Fever <input type="checkbox"/> Typhus				<input type="checkbox"/> Pertussis <input type="checkbox"/> Tetanus <input type="checkbox"/> Japanese Encephalitis <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Congenital Rubella Syndrome Acute Hepatitis (except Hepatitis A) <input type="checkbox"/> Type B <input type="checkbox"/> Type C <input type="checkbox"/> Type D <input type="checkbox"/> Type E <input type="checkbox"/> Unspecified (070x) <input type="checkbox"/> Mumps <input type="checkbox"/> Legionellosis <input type="checkbox"/> Invasive Haemophilus Influenzae Type b Infection <input type="checkbox"/> Syphilis <input type="checkbox"/> Gonorrhoea <input type="checkbox"/> Neonatal Tetanus <input type="checkbox"/> Enteroviruses Infection with Severe Complications AIDS <input type="checkbox"/> HIV infection <input type="checkbox"/> AIDS Specify risk factors for HIV/AIDS infection : _____ Confirmation Unit of Western Blot : _____ Confirmation Unit of RT-PCR : _____ Confirmation Unit of DNA-PCR : _____ <input type="checkbox"/> Hansen's Disease										<input type="checkbox"/> Herpesvirus B Infection <input type="checkbox"/> Leptospirosis <input type="checkbox"/> Melioidosis <input type="checkbox"/> Botulism <input type="checkbox"/> NDM-1 Enterobacteriaceae <input type="checkbox"/> Invasive Pneumococcal Disease <input type="checkbox"/> Q fever <input type="checkbox"/> Murine Typhus <input type="checkbox"/> Lyme Disease <input type="checkbox"/> Tularemia <input type="checkbox"/> Scrub Typhus <input type="checkbox"/> Varicella <input type="checkbox"/> Cat-Scratch Disease <input type="checkbox"/> Toxoplasmosis <input type="checkbox"/> Complicated Influenza <input type="checkbox"/> Creutzfeldt-Jakob disease Category V Communicable Diseases <input type="checkbox"/> Rift Valley Fever <input type="checkbox"/> Marburg Haemorrhagic Fever <input type="checkbox"/> Yellow Fever <input type="checkbox"/> Ebola Haemorrhagic Fever <input type="checkbox"/> Lassa Fever <input type="checkbox"/> Others _____			
IV. Remarks	1. Tuberculosis : <input type="checkbox"/> Acid fast stain : <input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Not tested <input type="checkbox"/> Tested but not detected · Date of Testing: _____(y/m/d) <input type="checkbox"/> TB culture : <input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Not tested <input type="checkbox"/> Tested but not detected · Date of Testing: _____(y/m/d) <input type="checkbox"/> Typical tuberculosis pathology report · Date of Testing : _____(y/m/d) · <input type="checkbox"/> pleural effusion <input type="checkbox"/> Chest and other X-ray examination : <input type="checkbox"/> Normal <input type="checkbox"/> No cavity <input type="checkbox"/> With cavity · Date of Examination: _____(y/m/d) ;																	
	2. Testing result by reported hospital :																	

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-reportable diseases, suspected cases must be reported as soon as possible.

For Health Agency

Signed by Person-in-charge		Signed by Section Chief	
----------------------------	--	-------------------------	--

Express Mail

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-1000100896 dated September 16, 2011, Class 4 Notifiable Communicable Disease "Severe Complicated Influenza Case" is changed name to "Complicated Influenza."
- (2) 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.
- (3) 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.
- (4) 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.
- (5) Botulism poisoning, Rabies : On detection of suspected cases, please contact health agencies immediately for anti-toxin, vaccines or immunoglobulin for treatment.
- (6) 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).
- (7) 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.
- (8) 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.
- (9) 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.)
- (10) Website : <https://ida4.cdc.gov.tw/hospital>

For further information, please contact :

_____ Health Bureau, Disease Control Section
 Hot Line : _____

appendix 4

2011 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 52	26	27	28	29	30	31	1	week 5	30	31	1	2	3	4	5	week 9	27	28	1	2	3	4	5
week 1	2	3	4	5	6	7	8	week 6	6	7	8	9	10	11	12	week 10	6	7	8	9	10	11	12
week 2	9	10	11	12	13	14	15	week 7	13	14	15	16	17	18	19	week 11	13	14	15	16	17	18	19
week 3	16	17	18	19	20	21	22	week 8	20	21	22	23	24	25	26	week 12	20	21	22	23	24	25	26
week 4	23	24	25	26	27	28	29		27	28					week 13	27	28	29	30	31	1	2	
	30	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
						4	2	week 18	1	2	3	4	5	6	7	week 22	29	30	31	1	2	3	4
week 14	3	4	5	6	7	8	9	week 19	8	9	10	11	12	13	14	week 23	5	6	7	8	9	10	11
week 15	10	11	12	13	14	15	16	week 20	15	16	17	18	19	20	21	week 24	12	13	14	15	16	17	18
week 16	17	18	19	20	21	22	23	week 21	22	23	24	25	26	27	28	week 25	19	20	21	22	23	24	25
week 17	24	25	26	27	28	29	30		29	30	31				week 26	26	27	28	29	30	1	2	

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

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

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List of information providers

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Center for Disease Control of Taipei City Government Health Department
Public Health Department, New Taipei City Government
Keelung City Health Bureau
Public Health Bureau, Yilan County
Public Health Bureau, Kinmen County
Public Health Bureau, Lienchiang County
Public Health Bureau, Taoyuan County Government
Public Health Bureau, Hsinchu City Government
Public Health Bureau, Hsinchu County Government
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Health Bureau, Taichung City Government
Changhua County Public Health Bureau
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Public Health Bureau, Yunlin County
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