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2017

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2017

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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. Individual cases were reported by medical care institutions and physicians through the case reporting system for communicable diseases. Alternatively, medical care institutions and physicians also reported cases by submitting a “Report of cases of communicable and emerging infectious disease, include suspected cases”** by post/fax to the local health authority that then completed the case reporting process online.
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 “Case definition for Notifiable Communicable Diseases” to see the case definition of each disease.
   (4) 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. For the tables of analysis of time intervals, the statistics is based on the reporting locality.
   (2) By age group: The actual age of the confirmed case. The ages of the syphilis, congenital syphilis, gonorrhea, HIV infection, AIDS, Hansen’s disease and Creutzfeldt-Jakob 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, congenital syphilis, gonorrhea, HIV infection, AIDS, Hansen’s disease and Creutzfeldt-Jakob disease cases were calculated based on the month of diagnosis. The disease onset months of the TB and MDR-TB 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, congenital syphilis, gonorrhea, HIV infection, AIDS, Hansen's disease and Creutzfeldt-Jakob 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. Please refer to Appendix 3 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. As WHO modified the definition, we have generated the statistical data without category to make consistent baseline over the years.

(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 "2017 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. The analysis baseline in 2017 was based on the data before May 1, 2018.

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

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

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* Please see Appendix 1 for classification of communicable diseases.

** Please see Appendix 2 for the form of "Report of cases of communicable and emerging infectious disease, include suspected cases".

PART I

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, 2017

Unit: Person

Area / Locality	Midyear population	Category I				Category II	
		Smallpox	Plague	SARS	Rabies	Diphtheria	Typhoid[1] Fever
Total	23,555,522	-	-	-	-	-	16
Taipei Area							
Taipei City	2,689,481	-	-	-	-	-	2
New Taipei City	3,982,949	-	-	-	-	-	6
Keelung City	371,779	-	-	-	-	-	-
Yilan County	457,073	-	-	-	-	-	-
Kinmen County	136,285	-	-	-	-	-	-
Lienchiang County	12,738	-	-	-	-	-	-
Northern Area							
Taoyuan City	2,167,890	-	-	-	-	-	1
Hsinchu City	439,235	-	-	-	-	-	1
Hsinchu County	549,825	-	-	-	-	-	-
Miaoli County	556,498	-	-	-	-	-	-
Central Area							
Taichung City	2,777,155	-	-	-	-	-	2
Changhua County	1,284,802	-	-	-	-	-	-
Nantou County	503,107	-	-	-	-	-	-
Southern Area							
Yunlin County	692,623	-	-	-	-	-	-
Chiayi City	269,636	-	-	-	-	-	-
Chiayi County	513,251	-	-	-	-	-	2
Tainan City	1,886,278	-	-	-	-	-	-
Kao-Ping Area							
Kaohsiung City	2,778,142	-	-	-	-	-	-
Pingtung County	832,866	-	-	-	-	-	1
Penghu County	103,668	-	-	-	-	-	-
Eastern Area							
Hualien County	330,074	-	-	-	-	-	-
Taitung County	220,171	-	-	-	-	-	1
Others	-	-	-	-	-	-	-

Note: [1]13 cases of typhoid fever were imported.

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Category II						
	Dengue[1] Fever	Meningococcal Meningitis	Paratyphoid [1] Fever	Poliomyelitis	Acute[2] Flaccid Paralysis	Shigellosis[1]	Amoebiasis[1]
Total	343	12	4	-	61	162	378
Taipei Area							
Taipei City	67	2	1	-	3	21	37
New Taipei City	68	3	2	-	9	53	63
Keelung City	3	-	-	-	2	1	2
Yilan County	3	-	-	-	2	4	15
Kinmen County	-	-	-	-	-	-	1
Lienchiang County	-	-	-	-	-	-	-
Northern Area							
Taoyuan City	44	-	1	-	6	15	30
Hsinchu City	7	-	-	-	1	7	7
Hsinchu County	7	3	-	-	1	6	3
Miaoli County	4	-	-	-	3	3	8
Central Area							
Taichung City	42	-	-	-	9	20	48
Changhua County	13	-	-	-	2	4	16
Nantou County	9	-	-	-	-	1	9
Southern Area							
Yunlin County	3	-	-	-	1	7	12
Chiayi City	3	-	-	-	-	1	3
Chiayi County	5	-	-	-	1	2	6
Tainan City	18	1	-	-	10	8	32
Kao-Ping Area							
Kaohsiung City	37	1	-	-	9	3	62
Pingtung County	8	-	-	-	1	-	12
Penghu County	1	-	-	-	-	1	3
Eastern Area							
Hualien County	1	-	-	-	1	4	5
Taitung County	-	2	-	-	-	1	4
Others	-	-	-	-	-	-	-

Note: [1]The total case number of the following diseases includes imported cases: dengue fever (333), paratyphoid fever (3), shigellosis (58) and amoebiasis (191).

[2]No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis has been used for detecting cases of poliomyelitis after implementing the “Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus” since 1992.

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Midyear population	Category II						
		Malaria[1]		Measles[1]	Acute [1] Hepatitis A	Enterohaemorrhagic *E. coli* Infection	Hantavirus Syndrome	
		Indigenous	Imported				Hemorrhagic Fever with Renal Syndrome	Hantavirus Pulmonary Syndrome
Total	23,555,522	-	7	6	369	-	-	-
Taipei Area								
Taipei City	2,689,481	-	1	2	53	-	-	-
New Taipei City	3,982,949	-	-	1	81	-	-	-
Keelung City	371,779	-	-	-	6	-	-	-
Yilan County	457,073	-	-	-	5	-	-	-
Kinmen County	136,285	-	-	-	-	-	-	-
Lienchiang County	12,738	-	-	-	-	-	-	-
Northern Area								
Taoyuan City	2,167,890	-	1	2	36	-	-	-
Hsinchu City	439,235	-	-	1	8	-	-	-
Hsinchu County	549,825	-	-	-	4	-	-	-
Miaoli County	556,498	-	-	-	6	-	-	-
Central Area								
Taichung City	2,777,155	-	-	-	47	-	-	-
Changhua County	1,284,802	-	-	-	7	-	-	-
Nantou County	503,107	-	1	-	4	-	-	-
Southern Area								
Yunlin County	692,623	-	-	-	2	-	-	-
Chiayi City	269,636	-	-	-	2	-	-	-
Chiayi County	513,251	-	-	-	6	-	-	-
Tainan City	1,886,278	-	2	-	22	-	-	-
Kao-Ping Area								
Kaohsiung City	2,778,142	-	1	-	63	-		-
Pingtung County	832,866	-	-	-	14	-	-	-
Penghu County	103,668	-	-	-	-	-	-	-
Eastern Area								
Hualien County	330,074	-	1	-	2	-	-	-
Taitung County	220,171	-	-	-	1	-	-	-
Others	-	-	-	-	-	-	-	-

Note: [1]The total case number of the following diseases includes imported cases: malaria (7) measles (5), and acute hepatitis A (50).

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Category II						
	Cholera[1]	Rubella[1]	MDR-TB[3]	Chikungunya[1] Fever	West Nile Fever	Epidemic Typhus Fever	Anthrax
Total	2	3	103	11	-	-	-
Taipei Area							
Taipei City	-	1	4	4	-	-	-
New Taipei City	-	1	26	-	-	-	-
Keelung City	-	-	2	-	-	-	-
Yilan County	-	-	-	-	-	-	-
Kinmen County	-	-	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-
Northern Area							
Taoyuan City	1	-	9	2	-	-	-
Hsinchu City	-	1	1	-	-	-	-
Hsinchu County	-	-	1	-	-	-	-
Miaoli County	-	-	2	-	-	-	-
Central Area							
Taichung City	1	-	10	-	-	-	-
Changhua County	-	-	2	2	-	-	-
Nantou County	-	-	1	-	-	-	-
Southern Area							
Yunlin County	-	-	4	-	-	-	-
Chiayi City	-	-	1	-	-	-	-
Chiayi County	-	-	6	-	-	-	-
Tainan City	-	-	7	1	-	-	-
Kao-Ping Area							
Kaohsiung City	-	-	11	2	-	-	-
Pingtung County	-	-	7	-	-	-	-
Penghu County	-	-	-	-	-	-	-
Eastern Area							
Hualien County	-	-	9	-	-	-	-
Taitung County	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-

Note: [1]The total case number of the following diseases includes imported cases: cholera (1), rubella (2) and chikungunya fever (11).

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

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Midyear population	Category III					
		Pertussis	Tetanus[4]	Japanese Encephalitis	Tuberculosis[3]	Congenital[1] Rubella Syndrome	Acute[1] Hepatitis B
Total	23,555,522	34	11	25	9,759	1	151
Taipei Area							
Taipei City	2,689,481	6	1	1	797	-	12
New Taipei City	3,982,949	14	2	2	1,530	-	36
Keelung City	371,779	-	1	-	156	-	1
Yilan County	457,073	-	-	-	199	-	6
Kinmen County	136,285	-	-	-	19	-	-
Lienchiang County	12,738	-	-	-	2	-	-
Northern Area							
Taoyuan City	2,167,890	5	1	4	686	-	22
Hsinchu City	439,235	1	-	1	122	-	1
Hsinchu County	549,825	1	-	-	170	-	5
Miaoli County	556,498	1	-	-	161	-	1
Central Area							
Taichung City	2,777,155	-	1	1	932	1	18
Changhua County	1,284,802	5	1	3	617	-	4
Nantou County	503,107	-	-	1	303	-	-
Southern Area							
Yunlin County	692,623	-	-	1	415	-	-
Chiayi City	269,636	-	1	-	94	-	-
Chiayi County	513,251	-	-	2	241	-	-
Tainan City	1,886,278	-	1	2	863	-	13
Kao-Ping Area							
Kaohsiung City	2,778,142	-	1	3	1,507	-	22
Pingtung County	832,866	1	-	2	588	-	7
Penghu County	103,668	-	-	-	27	-	1
Eastern Area							
Hualien County	330,074	-	-	1	180	-	2
Taitung County	220,171	-	1	1	150	-	-
Others	-	-	-	-	-	-	-

Note: [1]The total case number of the following diseases includes imported cases: congenital rubella syndrome (1) and acute hepatitis B (8).

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

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

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Category III						
	Acute Hepatitis				Mumps[4]	Legionnaires'[1] Disease	Invasive Haemophilus Influenzae Type b Infection
	C[1]	D	E[1]	Un-specified			
Total	325	-	13	-	636	188	6
Taipei Area							
Taipei City	43	-	3	-	83	32	1
New Taipei City	61	-	1	-	102	40	-
Keelung City	7	-	1	-	10	1	-
Yilan County	15	-	-	-	23	4	-
Kinmen County	2	-	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-
Northern Area							
Taoyuan City	35	-	3	-	73	20	1
Hsinchu City	3	-	1	-	12	1	-
Hsinchu County	13	-	1	-	9	3	-
Miaoli County	4	-	-	-	17	2	-
Central Area							
Taichung City	29	-	-	-	54	9	-
Changhua County	7	-	-	-	15	10	-
Nantou County	5	-	-	-	28	1	-
Southern Area							
Yunlin County	7	-	-	-	6	7	-
Chiayi City	6	-	-	-	4	4	-
Chiayi County	10	-	-	-	4	4	-
Tainan City	18	-	-	-	39	15	-
Kao-Ping Area							
Kaohsiung City	37	-	2	-	108	16	1
Pingtung County	10	-	-	-	12	8	1
Penghu County	-	-	-	-	15	-	-
Eastern Area							
Hualien County	10	-	-	-	20	10	1
Taitung County	3	-	1	-	2	1	1
Others	-	-	-	-	-	-	-

Note: [1]The total case number of the following diseases includes imported cases: acute hepatitis C (3), acute hepatitis E (2) and legionnaires' disease (14).

[4]Calculation for mumps was based on reported cases only.

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Midyear population	Category III							
		Syphilis[5]	Congenital[5] syphilis	Gonorrhea[5]	Neonatal Tetanus	Enteroviruses Infection with Severe Complications	HIV[6] Infection	AIDS[6]	Hansen's[5] Disease
Total	23,555,522	9,835	-	4,601	-	24	2,514	1,390	10
Taipei Area									
Taipei City	2,689,481	1,452	-	788	-	1	426	185	1
New Taipei City	3,982,949	2,057	-	1,069	-	1	587	286	-
Keelung City	371,779	197	-	142	-	-	36	33	-
Yilan County	457,073	208	-	39	-	-	29	25	-
Kinmen County	136,285	7	-	5	-	-	2	-	-
Lienchiang	12,738	2	-	-	-	-	-	-	-
Northern Area									
Taoyuan City	2,167,890	1,120	-	547	-	3	252	146	2
Hsinchu City	439,235	138	-	70	-	-	50	23	-
Hsinchu County	549,825	140	-	169	-	1	48	21	-
Miaoli County	556,498	118	-	84	-	2	19	8	-
Central Area									
Taichung City	2,777,155	1,188	-	350	-	4	318	172	3
Changhua County	1,284,802	327	-	107	-	1	42	41	-
Nantou County	503,107	142	-	129	-	-	30	22	-
Southern Area									
Yunlin County	692,623	163	-	65	-	-	35	43	-
Chiayi City	269,636	55	-	23	-	-	14	8	-
Chiayi County	513,251	111	-	41	-	1	17	11	-
Tainan City	1,886,278	672	-	179	-	4	177	92	2
Kao-Ping Area									
Kaohsiung City	2,778,142	1,135	-	497	-	4	296	183	1
Pingtung County	832,866	312	-	76	-	-	76	51	-
Penghu County	103,668	44	-	1	-	-	2	-	1
Eastern Area									
Hualien County	330,074	161	-	123	-	1	40	25	-
Taitung County	220,171	86	-	97	-	1	18	15	-
Others	-	-	-	-	-	-	-	-	-

Note: [5]The caseload calculation of syphilis, congenital syphilis, gonorrhea and Hansen's disease were based on diagnosis date.
[6]The caseload calculation of HIV infection and AIDS were based on diagnosis date, and foreign nationality cases were excluded.

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Category IV								
	Herpesvirus B Infection	Leptospirosis[1]	Melioidosis[1]	Botulism	Invasive[1] Pneumococcal Disease	Q Fever	Endemic[1] Typhus Fever	Lyme[1] Disease	Tularemia
Total	-	101	26	-	454	18	38	1	-
Taipei Area									
Taipei City	-	5	-	-	43	-	-	1	-
New Taipei City	-	19	-	-	70	-	1	-	-
Keelung City	-	-	-	-	14	-	-	-	-
Yilan County	-	2	-	-	7	-	-	-	-
Kinmen County	-	-	-	-	3	-	-	-	-
Lienchiang County	-	-	-	-	1	-	-	-	-
Northern Area									
Taoyuan City	-	3	-	-	29	2	1	-	-
Hsinchu City	-	3	-	-	5	-	-	-	-
Hsinchu County	-	10	-	-	11	-	-	-	-
Miaoli County	-	1	-	-	7	-	-	-	-
Central Area									
Taichung City	-	10	4	-	44	2	-	-	-
Changhua County	-	6	-	-	40	2	6	-	-
Nantou County	-	-	-	-	13	-	-	-	-
Southern Area									
Yunlin County	-	4	-	-	15	-	2	-	-
Chiayi City	-	-	-	-	-	-	-	-	-
Chiayi County	-	4	1	-	10	-	-	-	-
Tainan City	-	2	1	-	39	4	10	-	-
Kao-Ping Area									
Kaohsiung City	-	14	17	-	61	7	10	-	-
Pingtung County	-	10	3	-	26	1	8	-	-
Penghu County	-	2	-	-	1	-	-	-	-
Eastern Area									
Hualien County	-	6	-	-	12	-	-	-	-
Taitung County	-	-	-	-	3	-	-	-	-
Others	-	-	-	-	-	-	-	-	-

Note: [1]The total case number of the following diseases includes imported cases: leptospirosis (1), melioidosis (1), invasive pneumococcal disease (3), endemic typhus fever (1) and Lyme disease (1).

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Midyear population	Category IV					
		Scrub Typhus	Complicated[1] Varicella	Toxoplasmosis	Severe[1] Complicated Influenza	Creutzfeldt-[5] Jakob Disease	Brucellosis
Total	23,555,522	422	32	21	1,359	-	-
Taipei Area							
Taipei City	2,689,481	8	5	4	139	-	-
New Taipei City	3,982,949	15	6	3	184	-	-
Keelung City	371,779	1	1	-	11	-	-
Yilan County	457,073	14	1	1	35	-	-
Kinmen County	136,285	29	-	-	3	-	-
Lienchiang County	12,738	8	-	-	1	-	-
Northern Area							
Taoyuan City	2,167,890	14	3	1	84	-	-
Hsinchu City	439,235	3	-	-	9	-	-
Hsinchu County	549,825	4	-	1	22	-	-
Miaoli County	556,498	5	-	-	30	-	-
Central Area							
Taichung City	2,777,155	10	1	1	108	-	-
Changhua County	1,284,802	5	1	3	85	-	-
Nantou County	503,107	16	-	1	41	-	-
Southern Area							
Yunlin County	692,623	6	2	2	61	-	-
Chiayi City	269,636	-	-	-	20	-	-
Chiayi County	513,251	4	2	1	45	-	-
Tainan City	1,886,278	11	4	1	162	-	-
Kao-Ping Area							
Kaohsiung City	2,778,142	55	3	-	199	-	-
Pingtung County	832,866	21	-	-	72	-	-
Penghu County	103,668	56	-	-	5	-	-
Eastern Area							
Hualien County	330,074	71	2	2	22	-	-
Taitung County	220,171	66	1	-	21	-	-
Others	-	-	-	-	-	-	-

Note:[1]The total case number of the following diseases includes imported cases: complicated varicella (1) and severe complicated influenza (7).

[5]The caseload calculation of Creutzfeldt-Jakob disease was based on diagnosis date.

Table 1 Number of confirmed cases of notifiable diseases — by locality, 2017 *(Continued)*

Unit: Person

Area / Locality	Category V							
	Rift Valley Fever	Marburg Haemorrhagic Fever	Yellow Fever	Ebola Virus Disease	Lassa Fever	Middle East Respiratory Syndrome Coronavirus Infections	Novel[1] Influenza A Virus Infections	Zika Virus[1] Infection
Total	-	-	-	-	-	-	1	4
Taipei Area								
Taipei City	-	-	-	-	-	-	-	1
New Taipei City	-	-	-	-	-	-	-	2
Keelung City	-	-	-	-	-	-	-	-
Yilan County	-	-	-	-	-	-	-	-
Kinmen County	-	-	-	-	-	-	-	-
Lienchiang County	-	-	-	-	-	-	-	-
Northern Area								
Taoyuan City	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	1	1
Pingtung County	-	-	-	-	-	-	-	-
Penghu County	-	-	-	-	-	-	-	-
Eastern Area								
Hualien County	-	-	-	-	-	-	-	-
Taitung County	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-

Note: [1]The total case number of the following diseases includes imported cases: novel influenza A virus infections (1) and Zika virus infection (4).

Table 2 Number of confirmed cases and incidence[7] rate of notifiable diseases

— by age group, 2017

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	-	-	-	-	-	-	-	-	-	-
Category II										
Diphtheria	-	-	-	-	-	-	-	-	-	-
Typhoid Fever[1]	-	-	-	-	3	0.14	2	0.07	5	0.09
Dengue Fever[1]	-	-	-	-	19	0.92	51	1.70	150	2.79
Meningococcal Meningitis	2	1.05	2	0.23	-	-	5	0.17	-	-
Paratyphoid Fever[1]	-	-	-	-	-	-	-	-	4	0.07
Poliomyelitis	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	-	-	28	3.28	33	1.59	-	-	-	-
Shigellosis[1]	-	-	5	0.59	1	0.05	36	1.20	88	1.64
Amoebiasis[1]	-	-	-	-	-	-	52	1.73	206	3.83
Malaria[1]										
Indigenous	-	-	-	-	-	-	-	-	-	-
Imported	-	-	-	-	-	-	1	0.03	3	0.06
Measles[1]	1	0.53	1	0.12	-	-	-	-	2	0.04
Acute Hepatitis A[1]	-	-	2	0.23	6	0.29	75	2.49	197	3.66
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome	-						-			
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-	-	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-	-	-
Cholera[1]	-	-	-	-	-	-	-	-	-	-
Rubella[1]	-	-	-	-	-	-	1	0.03	2	0.04
MDR-TB[3]	-	-	-	-	-	-	1	0.03	14	0.30

Note: [1]The total case number of the following diseases includes imported cases: typhoid fever (13), dengue fever (333), paratyphoid fever (3), shigellosis (58), amoebiasis (191), malaria (7), measles (5), acute hepatitis A (50), cholera (1) and rubella (2).

[2]No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis has been used for detecting cases of poliomyelitis after implementing the “Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus” since 1992.

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

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

Table 2 Number of confirmed cases and incidence[7] rate of notifiable diseases

— by age group, 2017 *(Continued)*

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	-	-	-	-	-	-	-	-
Category II								
Diphtheria	-	-	-	-	-	-	-	-
Typhoid Fever[1]	5	0.06	1	0.03	-	-	16	0.07
Dengue Fever[1]	110	1.24	13	0.41	-	-	343	1.46
Meningococcal Meningitis	1	0.01	2	0.06	-	-	12	0.05
Paratyphoid Fever[1]	-	-	-	-	-	-	4	0.02
Poliomyelitis	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	-	-	-	-	-	-	61	0.26
Shigellosis[1]	31	0.35	1	0.03	-	-	162	0.69
Amoebiasis[1]	101	1.14	19	0.60	-	-	378	1.60
Malaria[1]								
Indigenous	-	-	-	-	-	-	-	-
Imported	3	0.03	-	-	-	-	7	0.03
Measles[1]	2	0.02	-	-	-	-	6	0.03
Acute Hepatitis A[1]	74	0.83	15	0.47	-	-	369	1.57
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-
Hantavirus Syndrome								
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-
Cholera[1]	2	0.02	-	-		-	2	0.01
Rubella[1]	-	-	-	-	-	-	3	0.01
MDR-TB[3]	49	0.60	39	1.20	-	-	103	0.40

Note: [1]The total case number of the following diseases includes imported cases: typhoid fever (13), dengue fever (333), paratyphoid fever (3), shigellosis (58), amoebiasis (191), malaria (7), measles (5), acute hepatitis A (50), cholera (1) and rubella (2).

[2]No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis has been used for detecting cases of poliomyelitis after implementing the “Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus” since 1992.

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

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

Table 2 Number of confirmed cases and incidence[7] rate of notifiable diseases

— by age group, 2017 *(Continued)*

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										
Chikungunya Fever[1]	-	-	-	-	1	0.05	3	0.10	5	0.09
West Nile Fever	-	-	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-	-
Category III										
Pertussis	17	8.94	1	0.12	3	0.14	5	0.17	3	0.06
Tetanus[4]	-	-	-	-	-	-	-	-	1	0.02
Japanese Encephalitis	-	-	-	-	-	-	1	0.03	3	0.06
Tuberculosis[3]	6	3.16	10	1.17	33	1.59	327	10.88	748	13.91
Congenital Rubella Syndrome[1]	1	0.53	-	-	-	-	-	-	-	-
Acute Hepatitis										
B[1]	-	-	-	-	-	-	18	0.60	56	1.04
C[1]	-	-	-	-	-	-	14	0.47	91	1.69
D	-	-	-	-	-	-	-	-	-	-
E[1]	-	-	-	-	-	-	-	-	2	0.04
Unspecified	-	-	-	-	-	-	-	-	-	-
Mumps[4]	3	1.58	122	14.31	237	11.43	48	1.60	88	1.64
Legionnaires' Disease[1]	-	-	-	-	-	-	-	-	10	0.19
Invasive Haemophilus Influenzae Type b Infection	-	-	-	-	-	-	-	-	1	0.02
Syphilis[5]	-	-	-	-	2	0.10	1,302	43.31	4,437	82.49
Congenital Syphilis[5]	-	-	-	-	-	-	-	-	-	-
Gonorrhea[5]	-	-	2	0.23	21	1.01	1,455	48.40	2,511	46.68
Neonatal Tetanus	-	-	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	3	1.58	9	1.06	11	0.53	1	0.03	-	-
HIV Infection[6]	1	0.53	-	-	2	0.10	664	22.09	1,424	26.47
AIDS[6]	-	-	-	-	2	0.10	197	6.55	758	14.09
Hansen's Disease[5]	-	-	-	-	-	-	-	-	9	0.17

Note: [1]The total case number of the following diseases includes imported cases: chikungunya fever (11), congenital rubella syndrome (1), acute hepatitis B (8), acute hepatitis C (3), acute hepatitis E (2) and legionnaires' disease (14).

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

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

[5]The caseload calculation of syphilis, congenital syphilis, gonorrhea, and Hansen's Disease were based on diagnosis date.

[6]The caseload calculation of HIV infection and AIDS were based on diagnosis date, and foreign nationality cases were excluded3

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

Table 2 Number of confirmed cases and incidence[7] rate of notifiable diseases

— by age group, 2017 *(Continued)*

Unit: Person

Disease	40-64 yrs		≥ 65 yrs		Age not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category II								
Chikungunya Fever[1]	2	0.02	-	-	-	-	11	0.05
West Nile Fever	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-
Category III								
Pertussis	4	0.05	1	0.03	-	-	34	0.14
Tetanus[4]	5	0.06	5	0.16	-	-	11	0.05
Japanese Encephalitis	16	0.18	5	0.16	-	-	25	0.11
Tuberculosis[3]	3,109	35.07	5,526	173.39	-	-	9,759	41.43
Congenital Rubella Syndrome[1]	-	-	-	-	-	-	1	<0.01
Acute Hepatitis								
B[1]	69	0.78	8	0.25	-	-	151	0.64
C[1]	136	1.53	84	2.64	-	-	325	1.38
D	-	-	-	-	-	-	-	-
E[1]	8	0.09	3	0.09	-	-	13	0.06
Unspecified	-	-	-	-	-	-	-	-
Mumps[4]	99	1.12	39	1.22	-	-	636	2.70
Legionnaires' Disease[1]	90	1.02	88	2.76	-	-	188	0.80
Invasive Haemophilus Influenzae Type b Infection	1	0.01	4	0.13	-		6	0.03
Syphilis[5]	2,103	23.72	1,991	62.47	-		9,835	41.75
Congenital Syphilis[5]	-	-	-	-	-	-	-	-
Gonorrhea[5]	578	6.52	34	1.07	-		4,601	19.53
Neonatal Tetanus	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	-	-	-	-	-	-	24	0.10
HIV Infection[6]	395	4.46	28	0.88	-	-	2,514	10.67
AIDS[6]	407	4.59	26	0.82	-	-	1,390	5.90
Hansen's Disease[5]	-	-	1	0.03	-	-	10	0.04

Note: [1]The total case number of the following diseases includes imported cases: chikungunya fever (11), congenital rubella syndrome (1), acute hepatitis B (8), acute hepatitis C (3), acute hepatitis E (2) and legionnaires' disease (14).

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

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

[5]The caseload calculation of syphilis, congenital syphilis, gonorrhea, and Hansen's Disease were based on diagnosis date.

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

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

Table 2 Number of confirmed cases and incidence[7] rate of notifiable diseases

— by age group, 2017 *(Continued)*

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 IV										
Herpesvirus B Infection	-	-	-	-	-	-	-	-	-	-
Leptospirosis[1]	-	-	-	-	-	-	5	0.17	24	0.45
Melioidosis[1]	-	-	-	-	-	-	-	-	1	0.02
Botulism	-	-	-	-	-	-	-	-	-	-
Invasive Pneumococcal Disease[1]	5	2.63	41	4.81	25	1.21	4	0.13	48	0.89
Q Fever	-	-	-	-	-	-	-	-	4	0.07
Endemic Typhus Fever[1]	-	-	-	-	-	-	5	0.17	6	0.11
Lyme Disease[1]	-	-	-	-	-	-	-	-	1	0.02
Tularemia	-	-	-	-	-	-	-	-	-	-
Scrub Typhus	-	-	6	0.70	14	0.67	26	0.86	64	1.19
Complicated Varicella[1]	3	1.58	-	-	-	-	6	0.20	7	0.13
Toxoplasmosis	-	-	-	-	1	0.05	-	-	12	0.22
Severe Complicated Influenza[1]	4	2.10	32	3.75	28	1.35	18	0.60	45	0.84
Creutzfeldt-Jakob Disease[5]	-	-	-	-	-	-	-	-	-	-
Brucellosis	-	-	-	-	-	-	-	-	-	-
Category V										
Rift Valley Fever	-	-	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-
Ebola Virus Disease	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-
Middle East Respiratory Syndrome Coronavirus Infections	-	-	-	-	-	-	-	-	-	-
Novel Influenza A Virus Infections[1]	-	-	-	-	-	-	-	-	-	-
Zika Virus Infection[1]	-	-	-	-	-	-	2	0.07	2	0.04

Note: [1]The total case number of the following diseases includes imported cases: leptospirosis (1), melioidosis (1), invasive pneumococcal disease (3), endemic typhus fever (1), Lyme disease (1), complicated varicella (1), severe complicated influenza (7), novel influenza A virus infections (1) and Zika virus infection (4).

[5]The caseload calculation of Creutzfeldt-Jakob disease was based on diagnosis date.

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

Table 2 Number of confirmed cases and incidence[7] rate of notifiable diseases

— by age group, 2017 *(Continued)*

Unit: Person

Disease	40-64 yrs		≥ 65 yrs		Age not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category IV								
Herpesvirus B Infection	-	-	-	-	-	-	-	-
Leptospirosis[1]	52	0.59	20	0.63	-	-	101	0.43
Melioidosis[1]	14	0.16	11	0.35	-	-	26	0.11
Botulism	-	-	-	-	-	-	-	-
Invasive Pneumococcal Disease[1]	145	1.64	186	5.84	-	-	454	1.93
Q Fever	7	0.08	7	0.22	-		18	0.08
Endemic Typhus Fever[1]	19	0.21	8	0.25	-	-	38	0.16
Lyme Disease[1]	-	-	-	-	-	-	1	<0.01
Tularemia	-	-	-	-	-	-	-	-
Scrub Typhus	229	2.58	83	2.60	-	-	422	1.79
Complicated Varicella[1]	13	0.15	3	0.09	-	-	32	0.14
Toxoplasmosis	5	0.06	3	0.09	-	-	21	0.09
Severe Complicated Influenza[1]	329	3.71	903	28.33	-	-	1,359	5.77
Creutzfeldt-Jakob Disease[5]	-	-	-	-	-	-	-	-
Brucellosis	-	-	-	-	-	-	-	-
Category V								
Rift Valley Fever	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-
Ebola Virus Disease	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-
Middle East Respiratory Syndrome Coronavirus Infections	-	-	-	-	-	-	-	-
Novel Influenza A Virus Infections[1]	-	-	1	0.03	-	-	1	<0.01
Zika Virus Infection[1]	-	-	-	-	-	-	4	0.02

Note: [1]The total case number of the following diseases includes imported cases: leptospirosis (1), melioidosis (1), invasive pneumococcal disease (3), endemic typhus fever (1), Lyme disease (2), complicated varicella (1), severe complicated influenza (7), novel influenza A virus infections (1) and Zika virus infection (4).

[5]The caseload calculation of Creutzfeldt-Jakob disease was based on diagnosis date.

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

Table 3 Number of confirmed cases of notifiable diseases — by month, 2017

Unit: Person

Disease	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Category I													
Smallpox	-	-	-	-	-	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-	-	-	-
SARS	-	-	-	-	-	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-	-	-	-	-	-
Category II													
Diphtheria	-	-	-	-	-	-	-	-	-	-	-	-	-
Typhoid Fever[1]	2	2	2	3	1	-	-	4	1	1	-	-	16
Dengue Fever[1]	30	22	13	11	13	22	49	56	33	47	25	22	343
Meningococcal Meningitis	1	1	3	-	1	-	4	1	-	-	-	1	12
Paratyphoid Fever[1]	-	2	-	-	-	-	-	1	-	1	-	-	4
Poliomyelitis	-	-	-	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	4	2	5	4	1	1	6	-	3	3	16	16	61
Shigellosis[1]	14	18	17	21	12	12	10	6	11	15	16	10	162
Amoebiasis[1]	26	32	41	19	32	31	32	36	29	26	35	39	378
Malaria[1]													
Indigenous	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported	-	-	-	1	-	2	2	-	2	-	-	-	7
Measles[1]	-	1	2	2	-	-	-	-	-	-	-	1	6
Acute Hepatitis A[1]	65	62	54	37	35	28	16	18	12	9	22	11	369
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome													
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera[1]	-	-	-	-	-	-	-	-	1	1	-	-	2
Rubella[1]	-	-	-	-	1	-	1	1	-	-	-	-	3
MDR-TB[3]	3	6	12	4	9	7	10	15	16	5	8	8	103

Note: [1]The total case number of the following diseases includes imported cases: typhoid fever (13), dengue fever (333), paratyphoid fever (3), shigellosis (58), amoebiasis (191), malaria (7), measles (5), acute hepatitis A (50), cholera (1) and rubella (2).

[2]No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis has been used for detecting cases of poliomyelitis after implementing the “Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus” since 1992.

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

Table 3 Number of confirmed cases of notifiable diseases — by month, 2017 *(Continued)*

Unit: Person

Disease	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Category II													
Chikungunya Fever[1]	-	2	1	2	-	1	2	2	1	-	-	-	11
West Nile Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-	-	-	-	-
Category III													
Pertussis	2	1	4	4	5	2	3	5	6	2	-	-	34
Tetanus[4]	2	-	-	1	1	2	-	1	1	1	1	1	11
Japanese Encephalitis	-	-	-	-	3	9	10	-	3	-	-	-	25
Tuberculosis[3]	731	711	836	720	839	938	875	973	802	826	766	742	9,759
Congenital Rubella Syndrome[1]	-	-	-	-	-	-	-	1	-	-	-	-	1
Acute Hepatitis													
B[1]	15	11	15	9	10	16	22	12	5	13	11	12	151
C[1]	13	22	26	20	24	37	37	25	20	33	26	42	325
D	-	-	-	-	-	-	-	-	-	-	-	-	-
E[1]	2	1	2	-	2	2	2	-	-	1	1	-	13
Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-
Mumps[4]	54	44	45	64	76	50	55	58	53	52	52	33	636
Legionnaires' Disease[1]	10	7	12	11	20	22	16	14	12	19	25	20	188
Invasive Haemophilus Influenzae Type b Infection	-	1	1	-	-	-	1	-	2	-	1	-	6
Syphilis[5]	628	609	876	740	829	918	891	887	843	848	846	920	9,835
Congenital Syphilis[5]	-	-	-	-	-	-	-	-	-	-	-	-	-
Gonorrhea[5]	345	358	478	337	425	400	402	427	375	355	364	335	4,601
Neonatal Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	-	1	-	1	-	3	2	2	-	2	3	10	24
HIV Infection[6]	196	186	268	197	245	260	205	235	201	168	177	176	2,514
AIDS[6]	114	89	119	102	122	136	103	137	137	88	122	121	1,390
Hansen's Disease[5]	-	-	1	1	1	1	1	3	-	-	1	1	10

Note: [1]The total case number of the following diseases includes imported cases: chikungunya fever (11), congenital rubella syndrome (1), acute hepatitis B (8), acute hepatitis C (3), acute hepatitis E (2) and legionnaires' disease (14).

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

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

[5]The caseload calculation of syphilis, congenital syphilis, gonorrhea, and Hansen's disease were based on diagnosis date.

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

Table 3 Number of confirmed cases of notifiable diseases — by month, 2017 *(Continued)*

Unit: Person

Disease	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Category IV													
Herpesvirus B Infection	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis[1]	3	6	6	1	9	15	9	12	7	19	6	8	101
Melioidosis[1]	2	1	1	1	2	1	3	5	2	2	2	4	26
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-
Invasive Pneumococcal Disease[1]	59	50	49	40	30	29	39	31	26	29	34	38	454
Q Fever	-	1	2	-	5	1	1	1	5	-	2	-	18
Endemic Typhus Fever[1]	-	3	3	4	9	5	3	6	-	3	-	2	38
Lyme Disease[1]	-	-	-	-	-	-	-	-	1	-	-	-	1
Tularemia	-	-	-	-	-	-	-	-	-	-	-	-	-
Scrub Typhus	37	30	10	16	37	65	67	38	38	34	30	20	422
Complicated Varicella[1]	1	1	3	-	3	3	3	5	2	4	2	5	32
Toxoplasmosis	1	3	2	-	1	3	2	4	-	1	2	2	21
Severe Complicated Influenza[1]	48	52	46	50	126	347	385	138	52	27	24	64	1,359
Creutzfeldt-Jakob Disease[5]	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis	-	-	-	-	-	-	-	-	-	-	-	-	-
Category V													
Rift Valley Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Ebola Virus Disease	-	-	-	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East Respiratory Syndrome Coronavirus Infections	-	-	-	-	-	-	-	-	-	-	-	-	-
Novel Influenza A Virus Infections[1]	1	-	-	-	-	-	-	-	-	-	-	-	1
Zika Virus Infection[1]	-	-	-	1	-	-	2	-	1	-	-	-	4

Note: [1]The total case number of the following diseases includes imported cases: leptospirosis (1), melioidosis (1), invasive pneumococcal disease (3), endemic typhus fever (1), Lyme disease (1), complicated varicella (1), severe complicated influenza (7), novel influenza A virus infections (1), and Zika virus infection (4).

[5]The caseload calculation of Creutzfeldt-Jakob disease was based on diagnosis date.

Table 4 Number of confirmed cases and incidence[7] rate of notifiable diseases — by sex, 2017

Unit: Person

Disease	Female		Male		Sex not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category I								
Smallpox	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-
SARS	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-
Category II								
Diphtheria	-	-	-	-	-	-	-	-
Typhoid Fever[1]	10	0.08	6	0.05	-	-	16	0.07
Dengue Fever[1]	137	1.16	206	1.76	-	-	343	1.46
Meningococcal Meningitis	7	0.06	5	0.04	-	-	12	0.05
Paratyphoid Fever[1]	2	0.02	2	0.02	-	-	4	0.02
Poliomyelitis	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	30	0.25	31	0.26	-	-	61	0.26
Shigellosis[1]	56	0.47	106	0.90	-	-	162	0.69
Amoebiasis[1]	140	1.18	238	2.03	-	-	378	1.60
Malaria[1]								
Indigenous	-	-	-	-	-	-	-	-
Imported	1	0.01	6	0.05	-	-	7	0.03
Measles[1]	4	0.03	2	0.02	-	-	6	0.03
Acute Hepatitis A[1]	68	0.57	301	2.57	-	-	369	1.57
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-
Hantavirus Syndrome								
Hemorrhagic Fever with Renal Syndrome	-	-	-	-	-	-	-	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-
Cholera[1]	-	-	2	0.02	-	-	2	0.01
Rubella[1]	-	-	3	0.03	-	-	3	0.01
MDR-TB[3]	29	0.25	74	0.63	-	-	103	0.44

Note: [1]The total case number of the following diseases includes imported cases: typhoid fever (13), dengue fever (333), paratyphoid fever (3), shigellosis (58), amoebiasis (191), malaria (7), measles (5), acute hepatitis A (50), cholera (1) and rubella (2).

[2]No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis has been used for detecting cases of poliomyelitis after implementing the “Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus” since 1992.

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

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

Table 4 Number of confirmed cases and incidence[7] rate of notifiable diseases — by sex, 2017 *(Continued)*

Unit: Person

Disease	Female		Male		Sex not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category II								
Chikungunya Fever[1]	5	0.04	6	0.05	-	-	11	0.05
West Nile Fever	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-
Category III								
Pertussis	16	0.14	18	0.15	-	-	34	0.14
Tetanus[4]	3	0.03	8	0.07	-	-	11	0.05
Japanese Encephalitis	10	0.08	15	0.13	-	-	25	0.11
Tuberculosis[3]	3,071	25.95	6,688	57.07	-	-	9,759	41.43
Congenital Rubella Syndrome[1]	1	0.01	-	-	-	-	1	<0.01
Acute Hepatitis					-	-		
B[1]	59	0.50	92	0.79	-	-	151	0.64
C[1]	109	0.92	216	1.84	-	-	325	1.38
D	-	-	-	-	-	-	-	-
E[1]	4	0.03	9	0.08	-	-	13	0.06
Unspecified	-	-	-	-	-	-	-	-
Mumps[4]	297	2.51	339	2.89	-	-	636	2.70
Legionnaires' Disease[1]	35	0.30	153	1.31	-	-	188	0.80
Invasive Haemophilus Influenzae Type b Infection	2	0.02	4	0.03	-	-	6	0.03
Syphilis[5]	1,613	13.63	8,222	70.16	-	-	9,835	41.75
Congenital Syphilis[5]	-	-	-	-	-	-	-	-
Gonorrhea[5]	366	3.09	4,235	36.14	-	-	4,601	19.53
Neonatal Tetanus	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	11	0.09	13	0.11	-	-	24	0.10
HIV Infection[6]	68	0.57	2,446	20.87	-	-	2,514	10.67
AIDS[6]	52	0.44	1,338	11.42	-	-	1,390	5.90
Hansen's Disease[5]	4	0.03	6	0.05	-	-	10	0.04

Note: [1]The total case number of the following diseases includes imported cases: chikungunya fever (11), congenital rubella syndrome (1), acute hepatitis B (8), acute hepatitis C (3), acute hepatitis E (2) and legionnaires' disease (14).

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

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

[5]The caseload calculation of syphilis, congenital syphilis, gonorrhea, and Hansen's disease were based on diagnosis date.

[6]The caseload calculation of HIV infection and AIDS were based on diagnosis date, and foreign nationality cases were excluded

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

Table 4 Number of confirmed cases and incidence[7] rate of notifiable diseases — by sex, 2017 *(Continued)*

Unit: Person

Disease	Female		Male		Sex not stated		Total	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Category IV								
Herpesvirus B Infection	-	-	-	-	-	-	-	-
Leptospirosis[1]	22	0.19	79	0.67	-	-	101	0.43
Melioidosis[1]	6	0.05	20	0.17	-	-	26	0.11
Botulism	-	-	-	-	-	-	-	-
Invasive Pneumococcal Disease[1]	159	1.34	295	2.52	-	-	454	1.93
Q Fever	2	0.02	16	0.14	-	-	18	0.08
Endemic Typhus Fever[1]	11	0.09	27	0.23	-	-	38	0.16
Lyme Disease[1]	-	-	1	0.01	-	-	1	<0.01
Tularemia	-	-	-	-	-	-	-	-
Scrub Typhus	170	1.44	252	2.15	-	-	422	1.79
Complicated Varicella[1]	6	0.05	26	0.22	-	-	32	0.14
Toxoplasmosis	9	0.08	12	0.10	-	-	21	0.09
Severe Complicated Influenza[1]	577	4.87	782	6.67	-	-	1,359	5.77
Creutzfeldt-Jakob Disease[5]	-	-	-	-	-	-	-	-
Brucellosis	-	-	-	-	-	-	-	-
Category V								
Rift Valley Fever	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-
Ebola Virus Disease	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-
Middle East Respiratory Syndrome Coronavirus Infections	-	-	-	-	-	-	-	-
Novel Influenza A Virus Infections[1]	-	-	1	0.01	-	-	1	<0.01
Zika Virus Infection[1]	-	-	4	0.03	-	-	4	0.02

Note: [1]The total case number of the following diseases includes imported cases: leptospirosis (1), melioidosis (1), invasive pneumococcal disease (3), endemic typhus fever (1), Lyme disease (1), complicated varicella (1), severe complicated influenza (7), novel influenza A virus infections (1) and Zika virus infection (4).

[5]The caseload calculation of Creutzfeldt-Jakob disease was based on diagnosis date.

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

Table 5 Number of confirmed cases of notifiable diseases — by year, 2008-2017

Unit: Person

Disease	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Category I										
Smallpox	-	-	-	-	-	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-
SARS	-	-	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	1	1	-	-	-
Category II										
Diphtheria	-	-	-	-	-	-	-	-	-	-
Typhoid Fever[1]	33	80	33	49	26	19	25	29	14	16
Dengue Fever[1]	714	1,052	1,896	1,702	1,478	860	15,732	43,784	744	343
Meningococcal Meningitis	19	2	7	5	6	6	3	3	8	12
Paratyphoid Fever[1]	11	6	12	6	8	9	8	3	6	4
Poliomyelitis	-	-	-	-	-	-	-	-	-	-
Acute Flaccid Paralysis[2]	74	45	49	45	51	25	29	19	41	61
Shigellosis[1]	90	91	172	203	155	155	132	186	225	162
Amoebiasis[1]	227	190	262	256	258	270	300	350	314	378
Malaria[1]										
Indigenous	-	-	-	-	-	-	-	-	-	-
Imported	18	11	21	17	12	13	19	8	13	7
Measles[1]	16	48	12	33	9	8	26	29	14	6
Acute Hepatitis A[1]	236	234	110	104	99	139	117	171	1,133	369
Enterohaemorrhagic *E. coli* Infection	-	-	-	-	-	-	-	-	-	-
Hantavirus Syndrome										
Hemorrhagic Fever with Renal Syndrome	1	-	1	-	1	-	2	2	4	-
Hantavirus Pulmonary Syndrome	-	-	-	-	-	-	-	-	-	-
Cholera[1]	1	3	5	3	5	7	4	10	9	2
Rubella[1]	33	23	21	60	12	7	7	7	4	3
MDR-TB[3]	159	176	156	154	140	129	112	117	112	103

Note: [1]The total case number of the following diseases in 2017 includes imported cases: typhoid fever (13), dengue fever (333), paratyphoid fever (3), shigellosis (58), amoebiasis (191), malaria (7), measles (5), acute hepatitis A (50), cholera (1) and rubella (2).

[2]No wild poliovirus was detected since 1984. Nationwide surveillance of acute flaccid paralysis has been used for detecting cases of poliomyelitis after implementing the “Eradication Program for Measles, Congenital Rubella Syndrome, Poliomyelitis and Neonatal Tetanus” since 1992.

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

Table 5 Number of confirmed cases of notifiable diseases — by year, 2008-2017 *(Continued)*

Unit: Person

Disease	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Category II										
Chikungunya Fever[1]	9	9	13	1	5	29	7	4	14	11
West Nile Fever	-	-	-	-	-	-	-	-	-	-
Epidemic Typhus Fever	-	-	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-	-
Category III										
Pertussis	41	90	61	77	54	51	78	70	17	34
Tetanus[4]	18	12	12	10	17	24	9	12	14	11
Japanese Encephalitis	17	18	33	22	32	16	18	30	23	25
Tuberculosis[3]	14,265	13,336	13,237	12,634	12,338	11,528	11,326	10,711	10328	9,759
Congenital Rubella Syndrome[1]	1	-	-	-	-	-	-	-	-	1
Acute Hepatitis										
B[1]	231	152	172	163	97	97	120	125	118	151
C[1]	124	131	41	34	34	10	205	217	207	325
D	4	1	1	-	-	-	1	2	2	-
E[1]	14	9	7	12	9	9	9	8	16	13
Unspecified	22	18	13	10	10	5	1	2	-	-
Mumps[4]	1,145	1,068	1,125	1,171	1,061	1,170	880	773	616	636
Legionnaires' Disease[1]	69	84	102	97	88	115	135	153	114	188
Invasive Haemophilus Influenzae Type b Infection	12	14	12	9	3	10	4	3	14	6
Syphilis[5]	6,526	6,668	6,482	6,372	5,896	6,346	6,986	7,471	8,725	9,835
Congenital Syphilis[5,8]	…	…	…	…	…	…	…	…	1	-
Gonorrhea[5]	1,621	2,137	2,265	1,978	1,983	2,155	2,622	3,587	4,469	4,601
Neonatal Tetanus	-	-	-	-	-	-	-	-	-	-
Enteroviruses Infection with Severe Complications	373	29	16	59	153	12	6	6	33	24
HIV Infection[6]	1,752	1,648	1,796	1,967	2,224	2,244	2,236	2,327	2,396	2,514
AIDS[6]	849	930	1,087	1,075	1,280	1,430	1,387	1,440	1,412	1,390
Hansen's Disease[5]	8	7	5	5	13	7	9	16	10	10

Note: [1]The total case number of the following diseases in 2017 includes imported cases: chikungunya fever (11), congenital rubella syndrome (1), acute hepatitis B (8), acute hepatitis C (3), acute hepatitis E (2) and legionnaires' disease (14).

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

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

[5]The caseload calculation of syphilis, congenital syphilis, gonorrhea, and Hansen's disease were based on diagnosis date.

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

[8]Congenital Syphilis has been included in the list of notifiable diseases since April 1, 2016.

Table 5 Number of confirmed cases of notifiable diseases — by year, 2008-2017 *(Continued)*

Unit: Person

Disease	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Category IV										
Herpesvirus B Infection	-	-	-	-	-	-	-	-	-	-
Leptospirosis[1]	47	203	77	55	91	82	98	81	130	101
Melioidosis[1]	45	44	45	45	29	19	37	32	55	26
Botulism	11	1	11	6	-	1	-	2	6	-
Invasive Pneumococcal Disease[1]	805	690	737	837	749	625	587	524	592	454
Q Fever	91	89	89	35	53	48	42	43	45	18
Endemic Typhus Fever[1]	31	40	42	26	37	27	21	35	13	38
Lyme Disease[1]	2	-	-	-	1	-	2	2	2	1
Tularemia	-	-	-	1	-	-	-	-	-	-
Scrub Typhus	492	353	402	322	460	538	414	494	488	422
Complicated Varicella[1,9]	…	…	…	…	…	…	55	54	40	32
Toxoplasmosis	3	7	5	5	12	15	12	13	10	21
Severe Complicated Influenza[1,10]	22	1,134	882	1,481	1,595	965	1,721	857	2,084	1,359
Creutzfeldt-Jakob Disease[5]	-	3	-	-	-	-	-	-	-	-
Brucellosis[11]	…	…	…	…	-	-	-	1	-	-
Category V										
Rift Valley Fever	-	-	-	-	-	-	-	-	-	-
Marburg Haemorrhagic Fever	-	-	-	-	-	-	-	-	-	-
Yellow Fever	-	-	-	-	-	-	-	-	-	-
Ebola Virus Disease	-	-	-	-	-	-	-	-	-	-
Lassa Fever	-	-	-	-	-	-	-	-	-	-
Middle East Respiratory Syndrome Coronavirus Infections[12]	…	…	…	…	-	-	-	-	-	-
Novel Influenza A Virus Infections[1,13]	…	…	…	…	…	…	-	-	-	1
Zika Virus Infection[1,14]	…	…	…	…	…	…	…	…	13	4

Note: [1]The total case number of the following diseases in 2017 includes imported cases: leptospirosis (1), melioidosis (1), invasive pneumococcal disease (3), endemic typhus fever (1), Lyme disease (1). complicated varicella (1), severe complicated influenza (7), novel influenza A virus infections (1) and Zika virus infection (4).

[5]The caseload calculation of Creutzfeldt-Jakob disease was based on diagnosis date.

[9]Varicella was revised the notifiable condition into "complicated varicella", and has been validated since January 1, 2014.

[10]"Complicated influenza" was revised the notifiable condition into "severe complicated influenza", and has been validated since August 1, 2014.

[11]Brucellosis has been included in the list of notifiable diseases since February 7, 2012.

[12]"Severe acute respiratory infections associated with novel coronavirus" has been included in the list of notifiable diseases since October 3, 2012 which has been renamed as "Middle East respiratory syndrome coronavirus infections" since June 7, 2013.

[13]"Novel Influenza A Virus Infections" has been included in the list of notifiable diseases since July 1, 2014.

[14]Zika virus infection has been included in Category II notifiable disease since January 22, 2017, and reclassified as Category V since February 2, 2017.

Table 6 Analysis of time intervals between diagnosis and reporting for notifiable diseases — by locality, 2017

Unit: Day

Locality	2016			2017						
	No.	Average	Median	No.	Average	Median	<=24 hours		>24 hours	
							No.	%	No.	%
Total	12,266	0.3	0	7,876	0.3	0	7,845	99.6	31	0.4
Taipei City	1,464	0.2	0	1,035	0.1	0	1,035	100.0	-	-
New Taipei City	787	0.2	0	537	0.2	0	537	100.0	-	-
Keelung City	66	0.3	0	41	0.3	0	41	100.0	-	-
Yilan County	72	0.2	0	63	0.2	0	63	100.0	-	-
Kinmen County	7	0.6	0	6	1.0	1	6	100.0	-	-
Lienchiang County	-	-	-	-	-	-	-	-	-	-
Taoyuan City	875	0.2	0	666	0.2	0	635	95.3	31	4.7
Hsinchu City	131	0.2	0	118	0.1	0	118	100.0	-	-
Hsinchu County	32	0.3	0	24	0.2	0	24	100.0	-	-
Miaoli County	65	0.1	0	60	0.1	0	60	100.0	-	-
Taichung City	863	0.3	0	676	0.3	0	676	100.0	-	-
Changhua County	176	0.1	0	162	0.1	0	162	100.0	-	-
Nantou County	43	0.1	0	40	0.1	0	40	100.0	-	-
Yunlin County	84	0.2	0	85	0.2	0	85	100.0	-	-
Chiayi City	126	0.1	0	98	0.3	0	98	100.0	-	-
Chiayi County	89	0.4	0	38	0.2	0	38	100.0	-	-
Tainan City	1,079	0.2	0	609	0.2	0	609	100.0	-	-
Kaohsiung City	5,518	0.4	0	3,015	0.4	0	3,015	100.0	-	-
Pingtung County	432	0.3	0	257	0.3	0	257	100.0	-	-
Penghu County	31	0.4	0	23	0.3	0	23	100.0	-	-
Hualien County	280	0.2	0	292	0.3	0	292	100.0	-	-
Taitung County	46	0.1	0	31	0.1	0	31	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 from local health bureaus for notifiable diseases — by locality, 2017

Unit: Day

Locality	2016			2017						
	No.	Average	Median	No.	Average	Median	<=24 hours		>24 hours	
							No.	%	No.	%
Total	12,266	0.0	0	7,876	0.0	0	7,876	100.0	-	-
Taipei City	1,464	0.0	0	1,035	0.1	0	1,035	100.0	-	-
New Taipei City	787	0.1	0	537	0.1	0	537	100.0	-	-
Keelung City	66	0.0	0	41	0.2	0	41	100.0	-	-
Yilan County	72	0.0	0	63	0.0	0	63	100.0	-	-
Kinmen County	7	0.0	0	6	0.0	0	6	100.0	-	-
Lienchiang County	-	-	-	-	-	-	-	-	-	-
Taoyuan City	875	0.0	0	666	0.0	0	666	100.0	-	-
Hsinchu City	131	0.0	0	118	0.0	0	118	100.0	-	-
Hsinchu County	32	0.0	0	24	0.0	0	24	100.0	-	-
Miaoli County	65	0.0	0	60	0.0	0	60	100.0	-	-
Taichung City	863	0.1	0	676	0.1	0	676	100.0	-	-
Changhua County	176	0.0	0	162	0.0	0	162	100.0	-	-
Nantou County	43	0.0	0	40	0.0	0	40	100.0	-	-
Yunlin County	84	0.0	0	85	0.0	0	85	100.0	-	-
Chiayi City	126	0.0	0	98	0.0	0	98	100.0	-	-
Chiayi County	89	0.0	0	38	0.0	0	38	100.0	-	-
Tainan City	1,079	0.1	0	609	0.1	0	609	100.0	-	-
Kaohsiung City	5,518	0.0	0	3,015	0.0	0	3,015	100.0	-	-
Pingtung County	432	0.0	0	257	0.0	0	257	100.0	-	-
Penghu County	31	0.0	0	23	0.0	0	23	100.0	-	-
Hualien County	280	0.0	0	292	0.0	0	292	100.0	-	-
Taitung County	46	0.2	0	31	0.2	0	31	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 bureaus to Taiwan CDC for notifiable diseases — by locality, 2017

Unit: Day

Locality	2015			2017						
	No.	Average	Median	No.	Average	Median	<=24 hours		>24 hours	
							No.	%	No.	%
Total	12,266	0.0	0	7,876	0.0	0	7,870	99.9	6	0.1
Taipei City	1,464	0.0	0	1,035	0.0	0	1,034	99.9	1	0.1
New Taipei City	787	0.0	0	537	0.0	0	537	100.0	-	-
Keelung City	66	0.0	0	41	0.0	0	41	100.0	-	-
Yilan County	72	0.0	0	63	0.0	0	63	100.0	-	-
Kinmen County	7	0.0	0	6	0.0	0	6	100.0	-	-
Lienchiang County	-	-	-	-	-	-	-	-	-	-
Taoyuan City	875	0.0	0	666	0.0	0	665	99.8	1	0.2
Hsinchu City	131	0.0	0	118	0.0	0	118	100.0	-	-
Hsinchu County	32	0.0	0	24	0.0	0	24	100.0	-	-
Miaoli County	65	0.0	0	60	0.1	0	59	98.3	1	1.7
Taichung City	863	0.0	0	676	0.0	0	674	99.7	2	0.3
Changhua County	176	0.0	0	162	0.0	0	162	100.0	-	-
Nantou County	43	0.0	0	40	0.0	0	40	100.0	-	-
Yunlin County	84	0.0	0	85	0.0	0	84	98.8	1	1.2
Chiayi City	126	0.0	0	98	0.0	0	98	100.0	-	-
Chiayi County	89	0.0	0	38	0.0	0	38	100.0	-	-
Tainan City	1,079	0.0	0	609	0.0	0	609	100.0	-	-
Kaohsiung City	5,518	0.0	0	3,015	0.0	0	3,015	100.0	-	-
Pingtung County	432	0.0	0	257	0.0	0	257	100.0	-	-
Penghu County	31	0.0	0	23	0.0	0	23	100.0	-	-
Hualien County	280	0.0	0	292	0.0	0	292	100.0	-	-
Taitung County	46	0.0	0	31	0.0	0	31	100.0	-	-

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

Table 9 National immunization coverage — by counties/cities

Unit: person, person, %

Vaccines	BCG			DTaP-Hib-IPV					
Birth cohort	2016			2016			2015		
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	209,982	204,778	97.52	209,982	205,310	97.78	215,853	190,032	88.04
Taipei City	29,271	28,335	96.80	29,271	28,633	97.82	30,459	27,502	90.29
New Taipei City	33,003	31,982	96.91	33,003	32,129	97.35	33,380	29,004	86.89
Keelung City	2,455	2,406	98.00	2,455	2,411	98.21	2,452	2,222	90.62
Yilan County	3,519	3,462	98.38	3,519	3,463	98.41	3,485	3,213	92.20
Kinmen County	1,229	1,205	98.05	1,229	1,206	98.13	1,150	1,054	91.65
Lienchiang County	151	150	99.34	151	147	97.35	140	129	92.14
Taoyuan City	24,652	24,118	97.83	24,652	24,060	97.60	24,079	21,082	87.55
Hsinchu City	4,878	4,738	97.13	4,878	4,708	96.51	5,310	4,451	83.82
Hsinchu County	5,821	5,702	97.96	5,821	5,709	98.08	6,057	5,373	88.71
Miaoli County	4,450	4,364	98.07	4,450	4,348	97.71	5,070	4,536	89.47
Taichung City	27,843	27,118	97.40	27,843	27,197	97.68	29,578	25,480	86.15
Changhua County	12,248	12,060	98.47	12,248	12,066	98.51	11,430	10,500	91.86
Nantou County	3,401	3,283	96.53	3,401	3,276	96.32	3,198	2,758	86.24
Yunlin County	4,757	4,689	98.57	4,757	4,702	98.84	4,858	4,477	92.16
Chiayi City	2,239	2,173	97.05	2,239	2,183	97.50	2,226	1,953	87.74
Chiayi County	2,881	2,830	98.23	2,881	2,810	97.54	2,988	2,576	86.21
Tainan City	14,657	14,318	97.69	14,657	14,382	98.12	16,246	14,394	88.60
Kaohsiung City	21,970	21,537	98.03	21,970	21,562	98.14	23,017	20,154	87.56
Pingtung County	5,403	5,257	97.30	5,403	5,294	97.98	5,592	4,757	85.07
Penghu County	985	974	98.88	985	972	98.68	863	810	93.86
Hualien County	2,599	2,545	97.92	2,599	2,522	97.04	2,659	2,248	84.54
Taitung County	1,570	1,532	97.58	1,570	1,530	97.45	1,616	1,359	84.10

Note: 1. Source: National Immunization Information System.
2. Vaccination period: Before December 2017.
3. Data was calculated in April 2018.
4. Due to global DTaP-Hib-IPV vaccine shortage, the immunization schedule of the 4th dose of DTaP-Hib-IPV vaccine has been revised from 18 months to 27 months after birth in January 2014 to April 2017.

Table 9 National Immunization coverage — by counties/cities *(Continued)*

Unit: person, person, %

Vaccines	Hepatitis B						Varicella			MMR		
Birth cohort	2016			2016			2015			2015		
Dose	2nd dose			3rd dose			single dose			1st 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	209,982	207,216	98.68	209,982	205,470	97.85	215,853	211,859	98.15	215,853	212,455	98.43
Taipei City	29,271	28,846	98.55	29,271	28,631	97.81	30,459	29,821	97.91	30,459	29,924	98.24
New Taipei City	33,003	32,394	98.15	33,003	32,152	97.42	33,380	32,747	98.10	33,380	32,841	98.39
Keelung City	2,455	2,434	99.14	2,455	2,409	98.13	2,452	2,422	98.78	2,452	2,427	98.98
Yilan County	3,519	3,497	99.37	3,519	3,463	98.41	3,485	3,422	98.19	3,485	3,429	98.39
Kinmen County	1,229	1,223	99.51	1,229	1,215	98.86	1,150	1,136	98.78	1,150	1,136	98.78
Lienchiang County	151	151	100.00	151	148	98.01	140	137	97.86	140	137	97.86
Taoyuan City	24,652	24,419	99.05	24,652	24,084	97.70	24,079	23,606	98.04	24,079	23,664	98.28
Hsinchu City	4,878	4,765	97.68	4,878	4,716	96.68	5,310	5,147	96.93	5,310	5,146	96.91
Hsinchu County	5,821	5,768	99.09	5,821	5,706	98.02	6,057	5,963	98.45	6,057	5,978	98.70
Miaoli County	4,450	4,406	99.01	4,450	4,353	97.82	5,070	5,000	98.62	5,070	5,011	98.84
Taichung City	27,843	27,437	98.54	27,843	27,223	97.77	29,578	29,033	98.16	29,578	29,138	98.51
Changhua County	12,248	12,124	98.99	12,248	12,073	98.57	11,430	11,302	98.88	11,430	11,329	99.12
Nantou County	3,401	3,337	98.12	3,401	3,284	96.56	3,198	3,124	97.69	3,198	3,129	97.84
Yunlin County	4,757	4,727	99.37	4,757	4,700	98.80	4,858	4,795	98.70	4,858	4,809	98.99
Chiayi City	2,239	2,198	98.17	2,239	2,190	97.81	2,226	2,195	98.61	2,226	2,195	98.61
Chiayi County	2,881	2,857	99.17	2,881	2,816	97.74	2,988	2,950	98.73	2,988	2,953	98.83
Tainan City	14,657	14,447	98.57	14,657	14,399	98.24	16,246	15,968	98.29	16,246	15,995	98.46
Kaohsiung City	21,970	21,746	98.98	21,970	21,576	98.21	23,017	22,585	98.12	23,017	22,671	98.50
Pingtung County	5,403	5,352	99.06	5,403	5,301	98.11	5,592	5,484	98.07	5,592	5,511	98.55
Penghu County	985	967	98.17	985	972	98.68	863	850	98.49	863	854	98.96
Hualien County	2,599	2,566	98.73	2,599	2,526	97.19	2,659	2,584	97.18	2,659	2,586	97.25
Taitung County	1,570	1,555	99.04	1,570	1,533	97.64	1,616	1,588	98.27	1,616	1,592	98.51

Note: 1. Source: National Immunization Information System.
2. Vaccination period: Before December 2017.
3. Data was calculated in April 2018.

Table 9 National Immunization coverage — by counties/cities *(Continued)*

Unit: person, person, %

Vaccines	PCV13						JE					
Birth cohort	2016			2015			2015			2014		
Dose	2nd dose			3rd 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	209,982	205,671	97.95	215,853	206,676	95.75	215,853	207,905	96.32	214,018	200,118	93.51
Taipei City	29,271	28,589	97.67	30,459	29,257	96.05	30,459	29,250	96.03	30,550	28,793	94.25
New Taipei City	33,003	32,138	97.38	33,380	32,028	95.95	33,380	32,296	96.75	33,701	31,290	92.85
Keelung City	2,455	2,392	97.43	2,452	2,355	96.04	2,452	2,391	97.51	2,289	2,191	95.72
Yilan County	3,519	3,471	98.64	3,485	3,385	97.13	3,485	3,386	97.16	3,502	3,288	93.89
Kinmen County	1,229	1,213	98.70	1,150	1,103	95.91	1,150	1,113	96.78	1,095	1,037	94.70
Lienchiang County	151	149	98.68	140	136	97.14	140	136	97.14	131	123	93.89
Taoyuan City	24,652	24,155	97.98	24,079	23,121	96.02	24,079	23,107	95.96	22,306	20,973	94.02
Hsinchu City	4,878	4,765	97.68	5,310	5,017	94.48	5,310	4,917	92.60	5,628	5,051	89.75
Hsinchu County	5,821	5,742	98.64	6,057	5,845	96.50	6,057	5,849	96.57	6,426	6,005	93.45
Miaoli County	4,450	4,374	98.29	5,070	4,897	96.59	5,070	4,931	97.26	4,896	4,593	93.81
Taichung City	27,843	27,306	98.07	29,578	28,294	95.66	29,578	28,465	96.24	29,900	27,811	93.01
Changhua County	12,248	12,057	98.44	11,430	10,972	95.99	11,430	11,136	97.43	10,638	10,059	94.56
Nantou County	3,401	3,304	97.15	3,198	3,015	94.28	3,198	3,063	95.78	3,175	2,889	90.99
Yunlin County	4,757	4,695	98.70	4,858	4,693	96.60	4,858	4,766	98.11	4,937	4,739	95.99
Chiayi City	2,239	2,194	97.99	2,226	2,129	95.64	2,226	2,153	96.72	2,317	2,128	91.84
Chiayi County	2,881	2,824	98.02	2,988	2,859	95.68	2,988	2,903	97.16	2,860	2,683	93.81
Tainan City	14,657	14,359	97.97	16,246	15,434	95.00	16,246	15,667	96.44	16,059	15,094	93.99
Kaohsiung City	21,970	21,574	98.20	23,017	21,941	95.33	23,017	22,069	95.88	22,874	21,419	93.64
Pingtung County	5,403	5,308	98.24	5,592	5,301	94.80	5,592	5,370	96.03	5,621	5,194	92.40
Penghu County	985	971	98.58	863	837	96.99	863	845	97.91	808	782	96.78
Hualien County	2,599	2,549	98.08	2,659	2,504	94.17	2,659	2,523	94.89	2,604	2,370	91.01
Taitung County	1,570	1,542	98.22	1,616	1,553	96.10	1,616	1,569	97.09	1,701	1,606	94.42

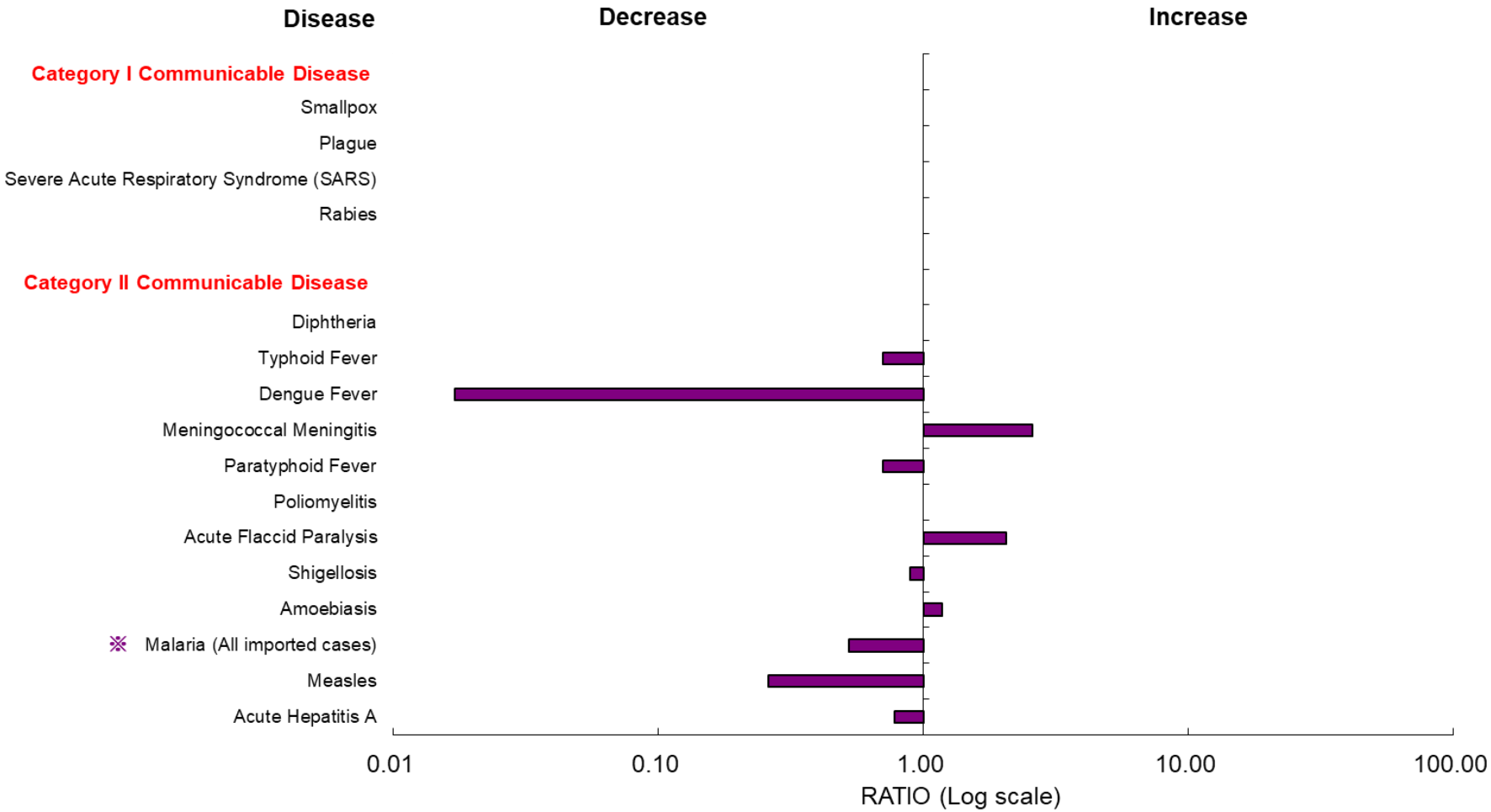
Note: 1. Source: National Immunization Information System.
2. Vaccination period: Before December 2017.
3. Data was calculated in April 2018.

Table 9 National Immunization coverage — by counties/cities *(Continued)*

Unit: person, person, %

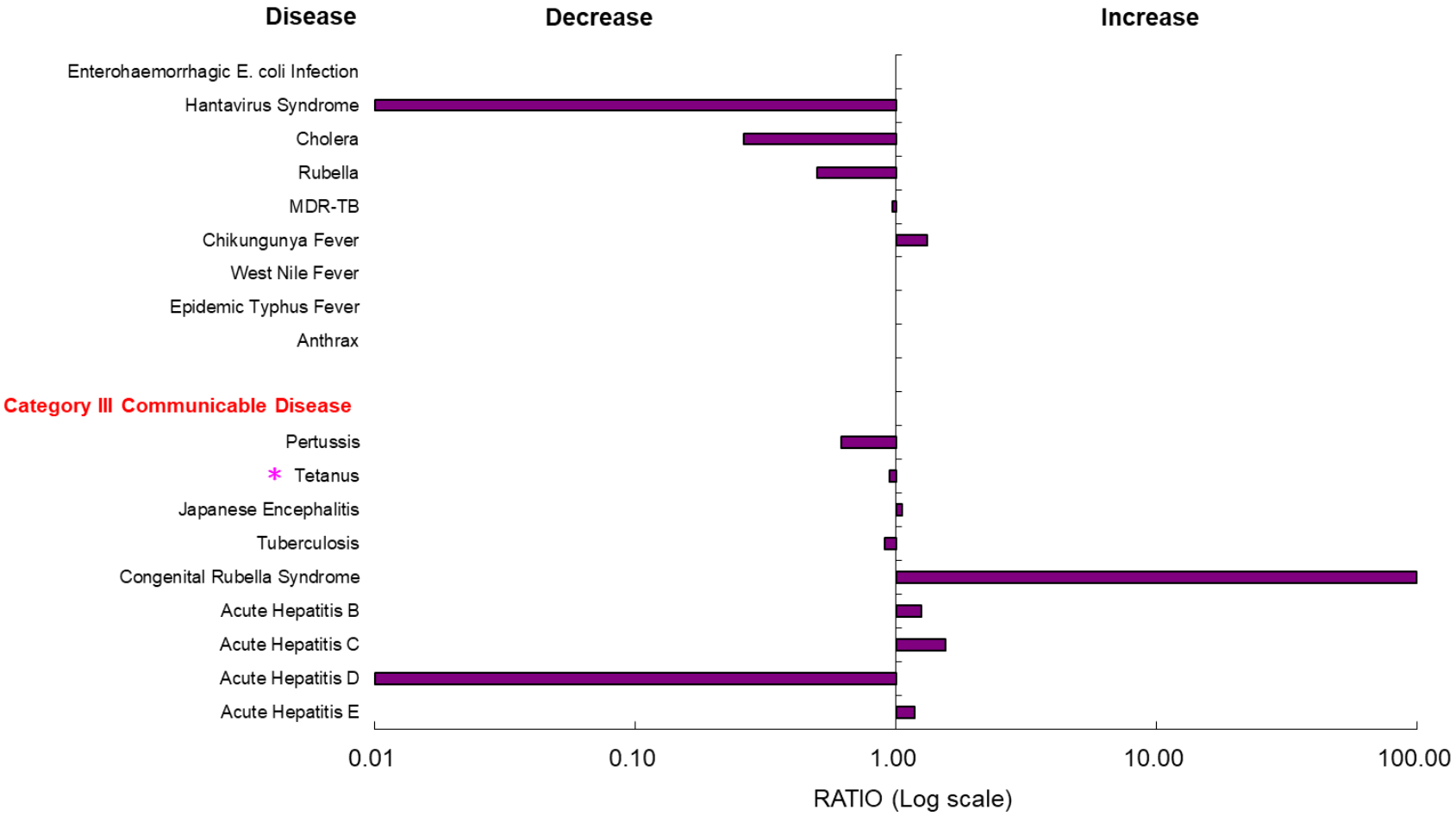
Vaccines	JE			MMR			Tdap-IPV		
Birth cohort	First grade of elementary school								
Locality	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage	Target population	Vaccinated population	Vaccination coverage
Total	188,148	177,954	94.58	188,148	180,119	95.73	188,148	176,971	94.06
Taipei City	21,569	20,182	93.57	21,569	20,484	94.97	21,569	20,277	94.01
New Taipei City	32,121	30,185	93.97	32,121	30,548	95.10	32,121	30,016	93.45
Keelung City	2,411	2,358	97.80	2,411	2,364	98.05	2,411	2,351	97.51
Yilan County	3,437	3,235	94.12	3,437	3,258	94.79	3,437	3,229	93.95
Kinmen County	730	695	95.21	730	701	96.03	730	679	93.01
Lienchiang County	81	79	97.53	81	76	93.83	81	79	97.53
Taoyuan City	20,416	19,250	94.29	20,416	19,461	95.32	20,416	19,044	93.28
Hsinchu City	4,962	4,579	92.28	4,962	4,666	94.03	4,962	4,604	92.79
Hsinchu County	5,932	5,726	96.53	5,932	5,769	97.25	5,932	5,694	95.99
Miaoli County	4,469	4,288	95.95	4,469	4,345	97.23	4,469	4,299	96.20
Taichung City	24,851	23,340	93.92	24,851	23,749	95.57	24,851	22,843	91.92
Changhua County	9,797	9,462	96.58	9,797	9,536	97.34	9,797	9,453	96.49
Nantou County	3,469	3,304	95.24	3,469	3,354	96.68	3,469	3,314	95.53
Yunlin County	4,797	4,643	96.79	4,797	4,663	97.21	4,797	4,615	96.21
Chiayi City	2,377	2,282	96.00	2,377	2,316	97.43	2,377	2,291	96.38
Chiayi County	2,951	2,857	96.81	2,951	2,868	97.19	2,951	2,812	95.29
Tainan City	13,598	12,962	95.32	13,598	13,039	95.89	13,598	12,907	94.92
Kaohsiung City	20,201	19,056	94.33	20,201	19,329	95.68	20,201	19,031	94.21
Pingtung County	5,392	5,095	94.49	5,392	5,162	95.73	5,392	5,080	94.21
Penghu County	564	549	97.34	564	555	98.40	564	549	97.34
Hualien County	2,398	2,256	94.08	2,398	2,297	95.79	2,398	2,251	93.87
Taitung County	1,625	1,571	96.68	1,625	1,579	97.17	1,625	1,553	95.57

Note: 1. Source: National Immunization Information System.
2. Vaccination period: Before December 2017.
3. Data was calculated in April 2018.



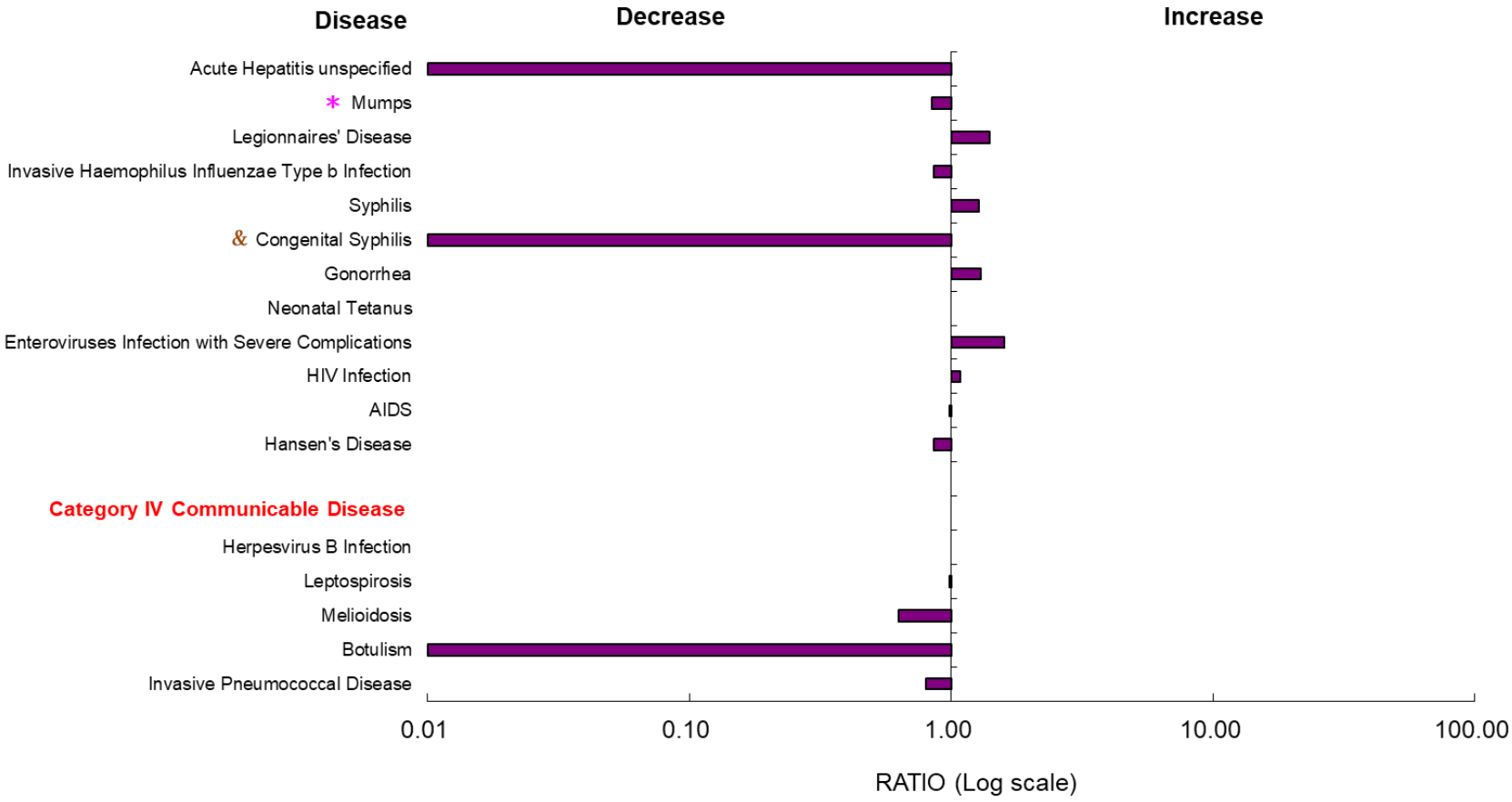
Note: 1. Analysis unit: confirmed cases and onset year.
2. Ratio = 2017 cases / means of 2014-2016.
3. The default value is 100 when denominator is zero and numerator is not zero. The default value is 0.01 when denominator is not zero and numerator is zero.
4. ※ The World Health Organization (WHO) has declared Taiwan as a malaria eradication region in 1965.

Figure 1　Comparison of 2017 total confirmed cases of notifiable diseases with historical data



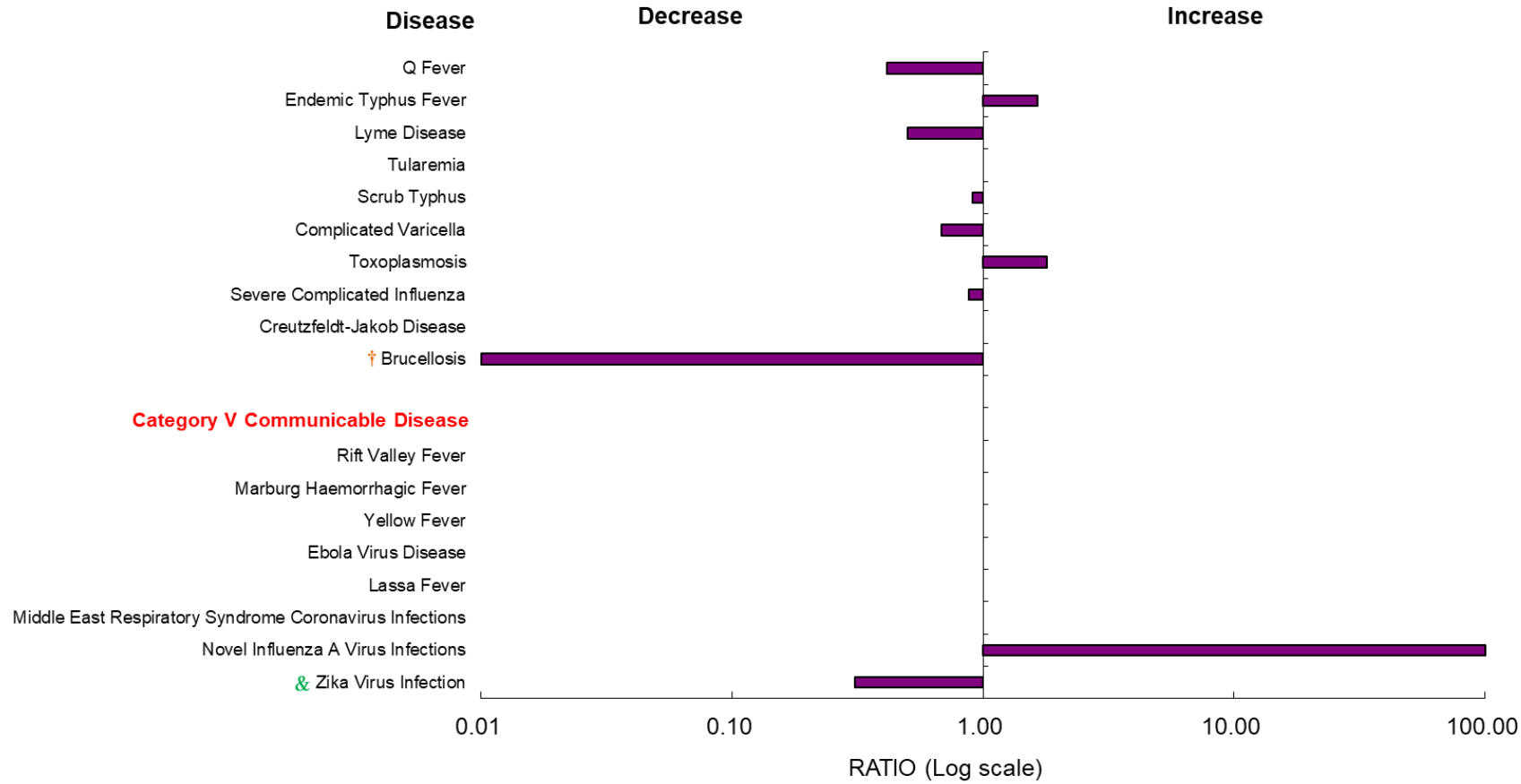
Note: 1. Analysis unit: confirmed cases and onset year.
2. Ratio = 2017 cases / means of 2014-2016.
3. The default value is 100 when denominator is zero and numerator is not zero. The default value is 0.01 when denominator is not zero and numerator is zero.
4. * For tetanus: based on reported cases.
5. For MDR-TB and tuberculosis: based on CDC's registration year and notification year respectively.

Figure 1 Comparison of 2017 total confirmed cases of notifiable diseases with historical data *(Continued)*



Note: 1. Analysis unit: confirmed cases and onset year.
2. Ratio = 2017 cases / means of 2014-2016.
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 mumps: based on reported cases.
5. For syphilis, congenital syphilis, gonorrhea and Hansen's disease: based on diagnosis year.
6. The numbers of HIV infection and AIDS were calculated based on diagnosis date, and the foreign nationality cases were excluded.
7. & The statistics of congenital syphilis was validated since April 1, 2016, hence there was no comparative result with historical data.

Figure 1 Comparison of 2017 total confirmed cases of notifiable diseases with historical data *(Continued)*



Note: 1. Analysis unit: confirmed cases and onset year.
2. Ratio = 2017 cases / means of 2014-2016.
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 Creutzfeldt-Jakob disease: based on diagnosis date.
5. †In 2012, brucellosis was first classified as a notifiable disease in Taiwan. The first ever case confirmed in Taiwan was an imported one in 2015.
6 & The statistics of Zika virus infection was validated since January 22, 2016, hence there was no comparative result with historical data.

Figure 1 Comparison of 2017 total confirmed cases of notifiable diseases with historical data *(Continued)*

PART II

Specific Surveillance Systems

◎ **Abbreviations and Symbols Used in Table**

– No reported cases

… Not under surveillance

Taiwan Nosocomial Infections Surveillance System

I. Preface

The "nosocomial infection" is limited to describing infections that acquired in hospitals, while the "healthcare-associated infection" (HAI) generally refers to infections that patients acquire while receiving treatment for medical or surgical conditions. HAIs may 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 analyze surveillance data using well-recognized indicators, so that 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 System) 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 as well as laboratory results of pathogen identified and antimicrobial susceptibility test for each HAI case, but also provides simple analytical function, so that reporting hospitals can analyze their own data on line 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 system 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 system 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 500 hospitals enrolled in TNIS system. Hospitals may use TNIS system to manage HAI cases and generate individual hospital reports. Also, Taiwan CDC periodically feedback hospitals with national 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. Number of medical centers and regional hospitals contributing ICU HAI data in this report in 2017.
2. Distribution of HAI rates by type of location in the ICUs of medical centers and regional hospitals in 2017.
3. Distribution of device-associated infection rates in the ICUs of medical centers and regional hospitals in 2017.
4. Distribution of major sites of HAI in ICU patients from medical centers and regional hospitals in 2017.
5. Common pathogens of HAI for patients in the ICUs of medical centers in 2017.
6. Common pathogens of HAI for patients in the ICUs of regional hospitals in 2017.
7. Antimicrobial resistance proportions of selected pathogens of HAI in the ICUs of medical centers and regional hospitals in 2017.

V. Surveillance method and main results

All the analytical results in this report were derived from TNIS system database with data updated to September 25, 2018. In 2017, there were 22 medical centers

(195 ICU units) and 84 regional hospitals (268 ICU units) reported both HAI cases and the number of patient-days to TNIS system for at least one calendar month (Table 10). 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 11. There were 4,440 episodes of HAI events occurred during 822,086 patient-days in the ICUs of 22 medical centers; the rate of infections was 5.4‰. However, in the ICUs of the 84 regional hospitals, there were 3,850 episodes of HAI events occurred during 861,081 patient-days; the rate of infections was 4.5‰. The HAI rates of ICUs were higher in medical centers than those in regional hospitals by corresponding types of ICU. 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 pooled mean of central line-associated bloodstream infection (CLABSI) rates was 3.6‰ in medical centers and 2.8‰ in regional hospitals, and the pooled mean of catheter-associated urinary tract infection (CAUTI) rates were 3.1‰ and 2.5‰ respectively, the rate of CAUTI and the rate of CLABSI in ICUs of medical centers are higher than those in regional hospitals; the pooled mean of ventilator-associated pneumonia (VAP) rates in regional hospitals is higher than that in medical centers, which are 1.1‰ and 0.5‰ respectively.

The distribution of site-specific HAIs in ICUs is shown in Table 12, with the bloodstream infections topped the list in medical centers (43.8%), followed by urinary tract (36.1%), and pneumonia (7.5%). In regional hospitals, the urinary tract infections topped the list (39.0%), followed by bloodstream infections (33.8%), and pneumonia (17.1%).The common pathogens for HAIs in ICUs are shown in Table 13 and Table 14. The top three pathogens in the ICUs were *Escherichia coli*, *Klebsiella pneumoniae*, *Enterococcus faecium* in medical centers and *Escherichia coli*, *Candida albicans*, *Klebsiella pneumoniae* in regional hospitals. The proportions of antimicrobial resistance among selected pathogens identified from patients in the ICUs with HAIs are shown in Figure 3. In the ICUs of medical centers, the proportion of Acinetobacter baumannii isolates those were resistant to carbapenem (CRAB) is 71.5%, the proportion of *K. pneumoniae* isolates those were resistant to carbapenem (CRKP) is 29.5%, the proportion of *Pseudomonas aeruginosa* isolates those were resistant to carbapenem (CRPA) is19.1%, the proportion of *Enterococci* isolates those were resistant to vancomycin (VRE) is 41.0%, and the proportion of *Staphylococcus aureus* isolates those were resistant to oxacillin (MRSA) is 64.6%. Meanwhile, the antimicrobial resistance proportions of selected pathogens isolated from patients acquired HAIs in the ICUs of regional hospitals were 71.4%, 21.8%, 15.3%, 36.0% and64.6% for CRAB, CRKP, CRPA, VRE and MRSA, respectively.

VI. 2017 Data analysis of HAI in the ICUs of medical centers and regional hospitals

Table 10 Number of medical centers and regional hospitals contributing ICU HAI data in this report, 2017

Hospital level	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter	
	No. of hospitals	No. of HAIs	No. of hospitals	No. of HAIs	No. of hospitals	No. of HAIs	No. of hospitals	No. of HAIs
Medical center	22	1,128	22	1,172	22	1,080	22	1,060
Regional hospital	84	981	84	972	83	994	83	897

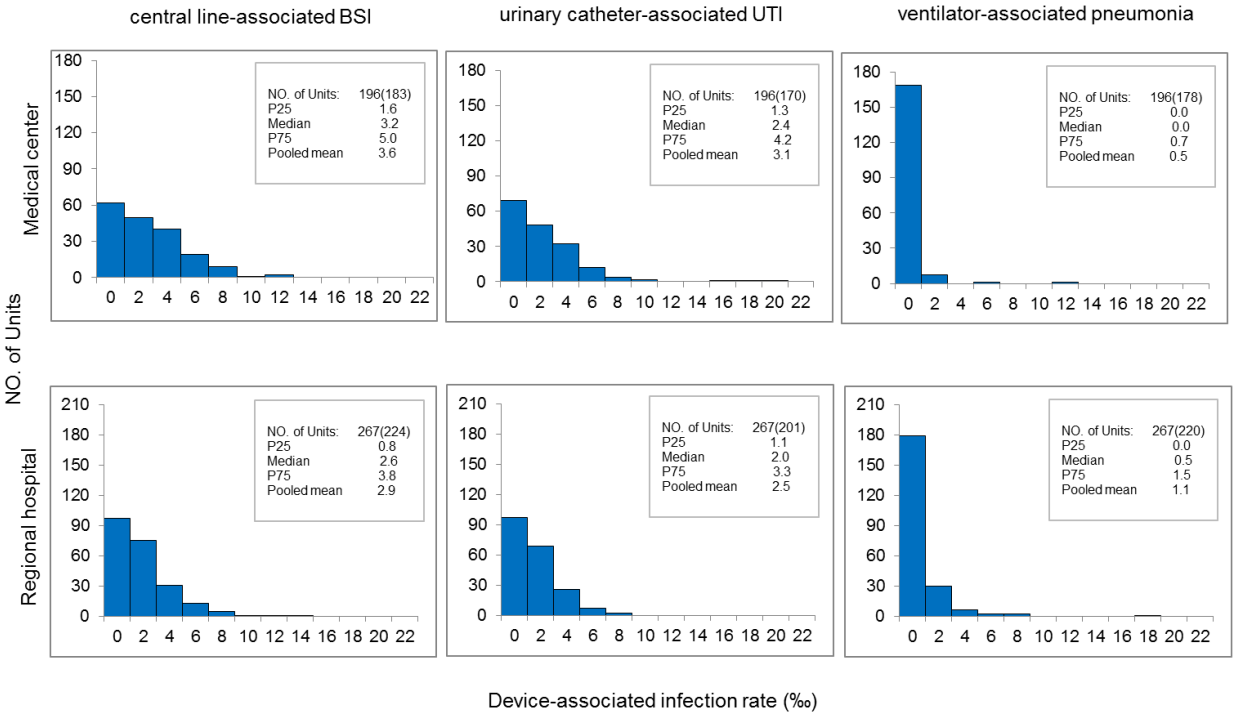
Note: Data updated to 2018/09/25

Table 11 Distribution of healthcare-associated infection rates by type of locations in the ICUs of medical centers and regional hospitals, 2017

Hospital level	Type of locations	No. of units[1]	No. of HAIs	Patient -days	HAI Rate[2] (‰)	Percentile		
						25th	50th	75th
Medical center	Medical ICU	50 (49)	1,622	244,810	6.6	4.1	5.8	8.8
	Surgical ICU	70 (65)	1,631	268,009	6.1	4.4	5.7	8.0
	Cardiology ICU	14 (13)	281	59,578	4.7	3.2	4.1	6.0
	Pediatric ICU	44 (44)	419	170,798	2.5	0.9	2.2	3.6
	Medical/surgical ICU	17 (16)	487	78,891	6.2	3.1	4.3	8.2
	Total	195 (187)	4,440	822,086	5.4	3.0	4.8	7.3
Regional hospital	Medical ICU	56 (55)	1,060	248,592	4.3	2.3	3.9	5.3
	Surgical ICU	48 (47)	921	162,340	5.7	3.0	4.5	6.4
	Cardiology ICU	11 (11)	176	40,900	4.3	2.6	4.0	4.9
	Pediatric ICU	65 (58)	72	56,434	1.3	0.0	0.0	1.3
	Medical/surgical ICU	88 (83)	1,621	352,815	4.6	3.2	4.6	6.3
	Total	268 (254)	3,850	861,081	4.5	1.6	3.6	5.5

Note: 1. Units with patient-days<50 are not included in percentile distribution; the number in parentheses is the number of units meeting minimum requirement for percentile distribution.

2. Healthcare-associated infection rate= (number of HAIs/number of patient-days) ×1000‰. For every unit, monthly data was included for analysis only when the patient days and number of HAI cases were both available.



Note: 1. device-associated infection rate= (number of HAIs/number of device-days) ×1000‰;

2. UTI, urinary tract infection; BSI, bloodstream infection;

3. Units with device-days<50 are not included in percentile distribution; the number in parentheses is the number of units meeting minimum requirement for percentile distribution.

Figure 2 Distribution of device-associated infection rates in the ICUs of medical centers and regional hospitals, 2017

Table12 Distribution of major types of healthcare-associated infection in the ICU patients from medical centers and regional hospitals, 2017

Types of infection	Medical center		Regional hospital	
	No.	%	No.	%
Urinary tract	1,604	36.1%	1,501	39.0%
Bloodstream	1,946	43.8%	1,303	33.8%
Pneumonia	334	7.5%	658	17.1%
Surgical site	214	4.8%	188	4.9%
Other	342	7.7%	200	5.2%
Total	4,440	100%	3,850	100%

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

Table 13 Common pathogens of healthcare-associated infections in the ICUs of medical centers, 2017

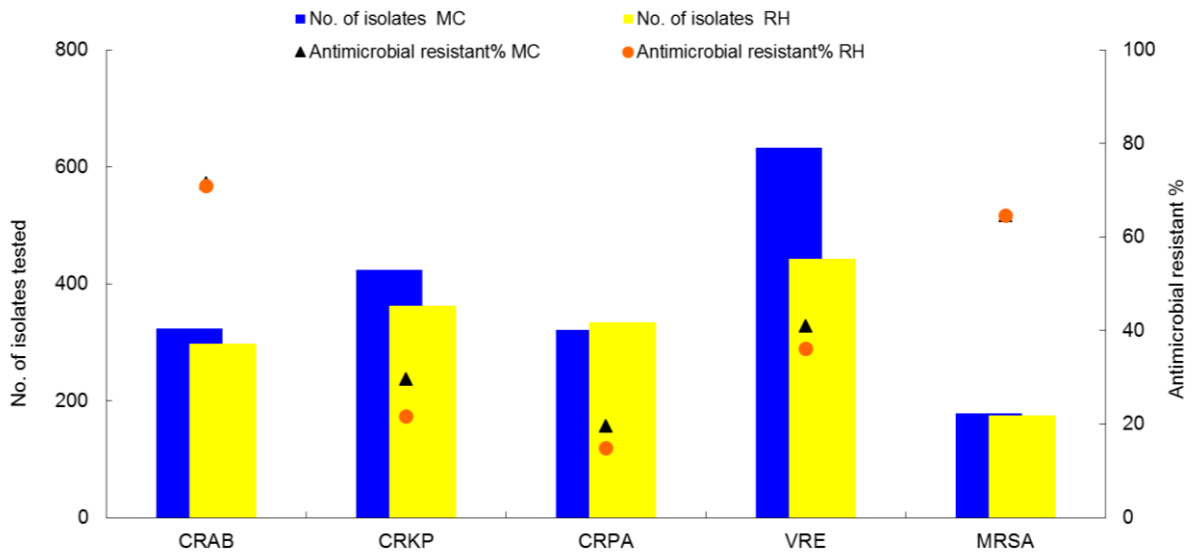
Pathogens	Total		Types of Infection									
			Urinary tract		Bloodstream		Pneumonia		Surgical site		Others	
	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.
Escherichia coli	1	513	1	337	9	98	7	18	1	35	5	25
Klebsiella pneumoniae	2	447	5	136	1	202	2	55	5	23	4	31
Enterococcus faecium	3	390	4	150	3	198			4	28	10	14
Yeast-like	4	380	2	316	17	42	17	2	13	4	8	16
Candida albicans	5	376	3	236	5	118	23	1	10	8	11	13
Pseudomonas aeruginosa	6	336	7	122	10	97	1	60	2	33	6	24
Acinetobacter baumannii	7	329	9	53	2	201	3	39	8	15	7	21
Other Candida spp. or NOS	8	325	6	133	4	180	17	2	13	4	13	6
Enterobacter species	9	231	10	46	6	115	4	32	5	23	9	15
E.cloacae		147		27		77		18		16		9
Other Enterobacter spp. or NOS		84		19		38		14		7		6
Enterococcus faecalis	10	223	8	92	11	88			3	30	11	13
Others		1,469		184		857		116		109		203
Total		5,019		1,805		2,196		325		312		381

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 14 Common pathogens of healthcare-associated infections in the ICUs of regional hospitals, 2017

Pathogens	Total		Types of Infection									
			Urinary tract		Bloodstream		Pneumonia		Surgical site		Others	
	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.
Escherichia coli	1	496	1	360	10	67	7	27	3	32	7	10
Candida albicans	2	471	2	346	9	73	8	20	7	16	5	16
Klebsiella pneumoniae	3	410	6	113	1	145	3	106	1	33	6	13
Pseudomonas aeruginosa	4	374	3	127	6	83	2	108	1	33	3	23
Acinetobacter baumannii	5	341	11	35	2	141	1	132	8	14	4	19
Enterococcus faecium	6	259	4	124	4	107			6	20	9	8
Other Candida spp. or NOS	7	213	5	122	7	80	15	3	11	5	16	3
Staphylococcus aureus	8	203	12	20	7	80	4	66	10	11	1	26
Enterobacter species	9	201	9	48	5	89	6	32	5	24	9	8
E.cloacae		142		36		60		21		19		6
Other Enterobacter spp. or NOS		59		12		29		11		5		2
Enterococcus faecalis	10	179	8	93	11	50	22	1	4	26	8	9
Others		1,103		295		541		113		77		77
Total		4,250		1,683		1,456		608		291		212

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. "Antimicrobial resistant %" indicates the % of Isolates with susceptibility tested to be intermediate or resistant to the antimicrobial specified.

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(MC) and regional hospitals(RH), 2017

School-based Surveillance System

I. Introduction

School children, who are in close contact with each other and pass infections around, are more susceptible to the communicable diseases. This is one of the main ways microorganisms circulate in campuses and communities, causing outbreaks of infectious diseases. To monitor the trends of communicable diseases in a multifaceted way, Taiwan Centers for Disease Control (Taiwan CDC) launched a pilot program for elementary schools to monitor and report symptoms and infectious diseases in February 2001. As of 2017, a total of 688 elementary schools enrolling students from kindergarten to 6th grade voluntarily participated in the system.

The school-based surveillance system is a simple, flexible, specific and sensitive communicable disease reporting system that can effectively reflect epidemic trends, detect possible outbreaks and facilitate timely adoption of control measures, in order to contain the spread of communicable diseases in elementary schools.

In addition, these data are used to analyze and estimate the scope and magnitude of diseases at the school and regional levels, which can aid the early detection of disease clusters in communities. As a result, the school-based surveillance system serves the dual purposes of safeguarding the health of school children and achieving control of communicable diseases.

II. Objectives of surveillance system

1. Understand and establish the long-term trends of communicable diseases in schools and detect aberration in surveillance data.
2. Detect early epidemic trends in communities.
3. Provide references for assessing the disease burden.

III. Diseases under surveillance

Diseases and symptoms reported under the school-based surveillance system include influenza like illness, hand-foot-and-mouth disease or herpangina, diarrhea, fevers, acute hemorrhagic conjunctivitis, varicella and other internal medicine diseases on a weekly basis.

IV. Reporting method, data analysis and data feedback

Schools participate in the surveillance system on a voluntary basis. The health care workers in public elementary schools report weekday data online by every Monday during each semester. Assigned officers at the Regional Centers of CDC observe the data completion and whether there are possible clusters of other communicable diseases. The weekly data are compiled, analyzed, and displayed as figures and periodically post on the CDC official website. In addition, the released“ Sentinel Surveillance Weekly Report” on the website of the school-based surveillance system disseminate to the reporting schools, relevant health and education facilities.

V. Selective analysis of reportable diseases

1. Influenza-like illness

■ Case definition:

Acute respiratory infection with the following symptoms:

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

(2) Muscular soreness or headache or extreme fatigue.

■ Epidemic analysis:

According to CDC school-based surveillance system, the morbidities of influenza-like illness among schools were between 0.05% and 0.38% in 2017. The morbidities of week 20 to 25 and week 50 to 52 in 2017 were higher than the same period of 2015 and 2016.

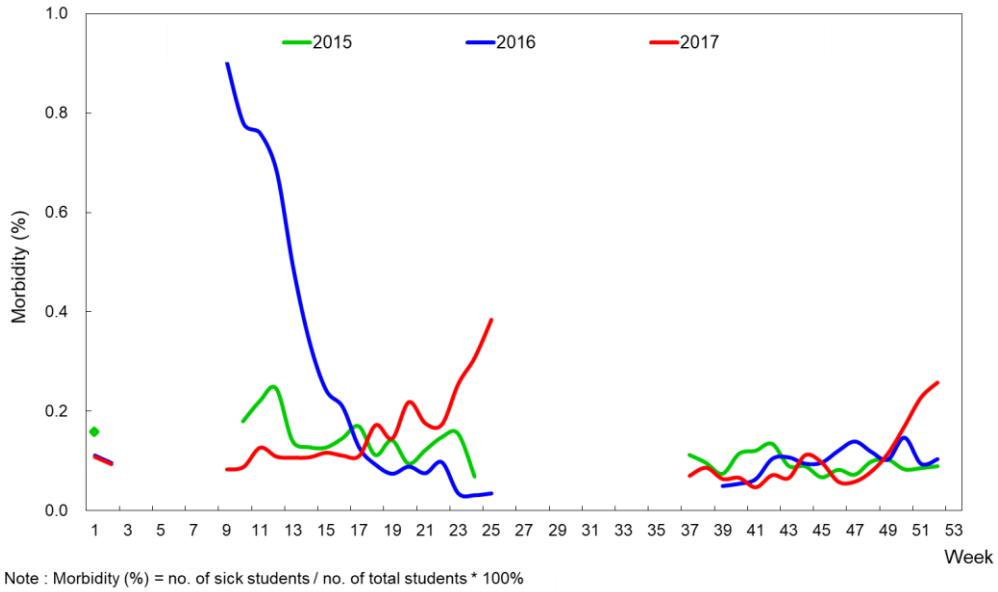


Figure 4 ILI morbidity reported by the School-based Surveillance System, 2015-2017

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

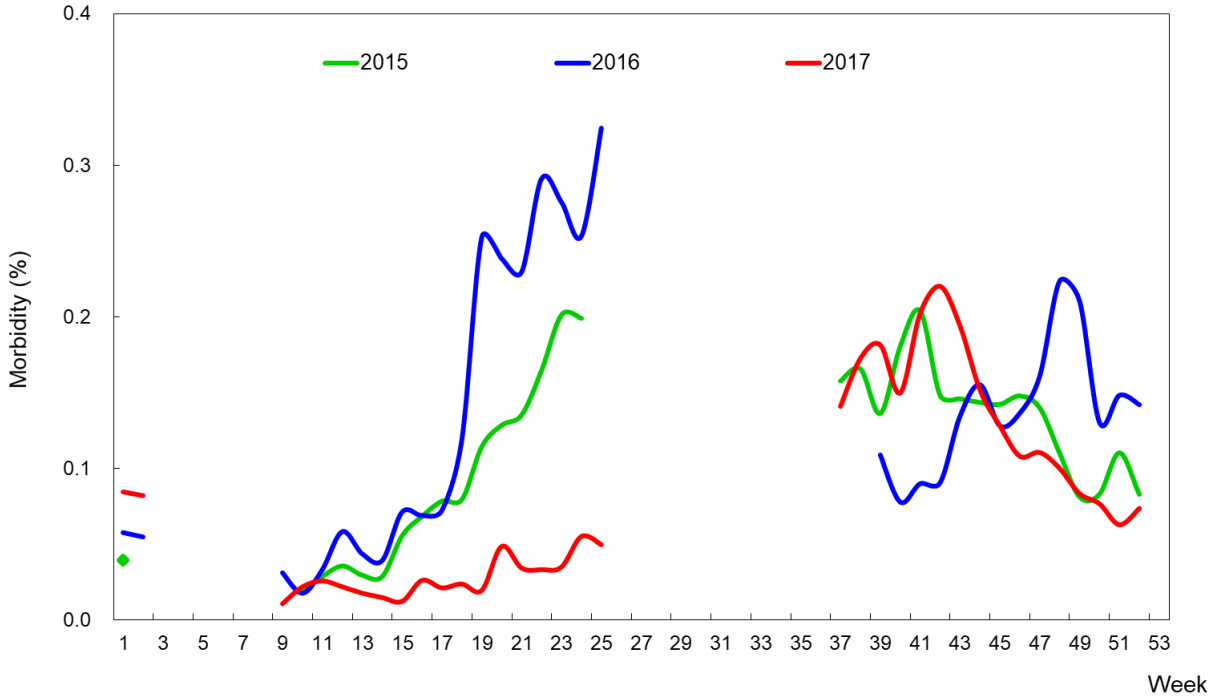
■ Case definition:

(1) Case definition of hand-foot-and-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 CDC school-based surveillance system, the morbidities of hand-foot-mouth disease or herpangina among schools were between 0.01% and 0.22% in 2017. Overall, it was lower than the trends in 2015 and 2016.



Note : Morbidity (%) = no. of sick students / no. of total students * 100%

Figure 5 Hand-foot-mouth disease (HFMD) or herpangina morbidity reported by the School-based Surveillance System, 2015-2017

3. Diarrhea

■ Case definition:

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

(1) Vomiting

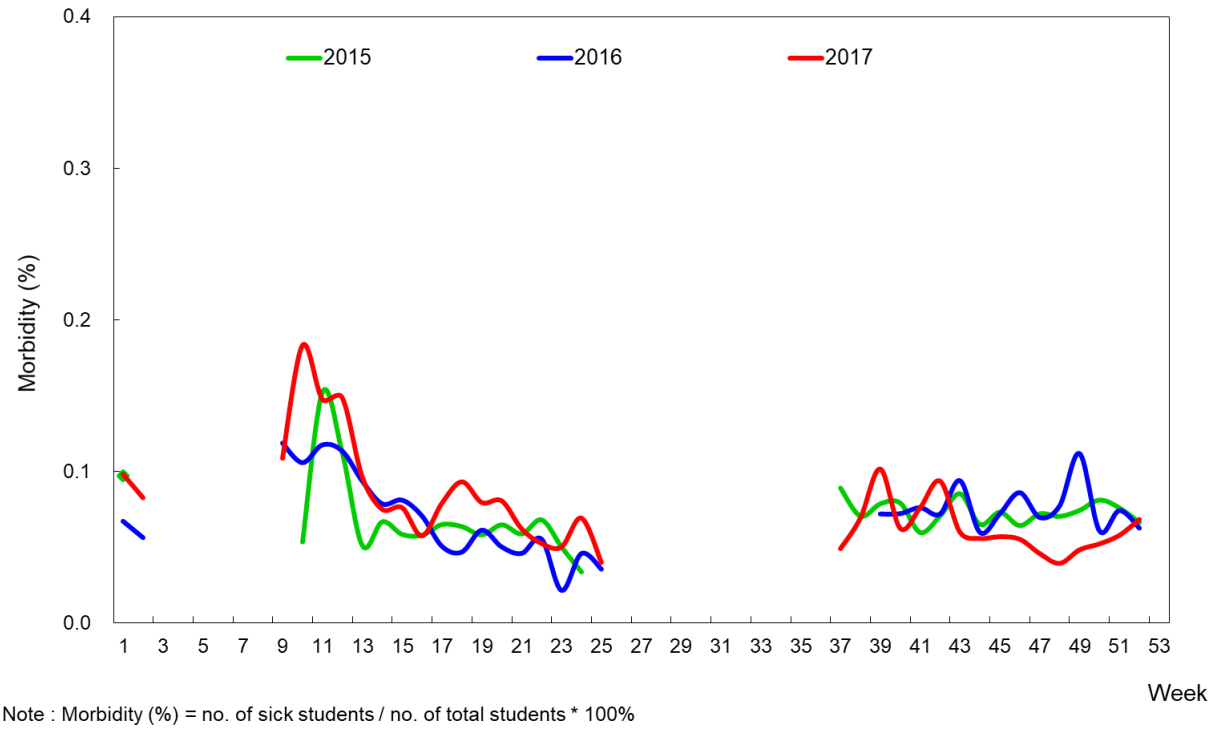
(2) Fever

(3) Mucous stool or hematochezia

(4) Watery diarrhea.

■ Epidemic analysis:

According to CDC school-based surveillance system, the morbidities of diarrhea among schools were between 0.04% and 0.18% in 2017. The trend was similar to the last two years.



Note : Morbidity (%) = no. of sick students / no. of total students * 100%

Figure 6 Diarrhea morbidity reported by the School-based Surveillance System, 2015-2017

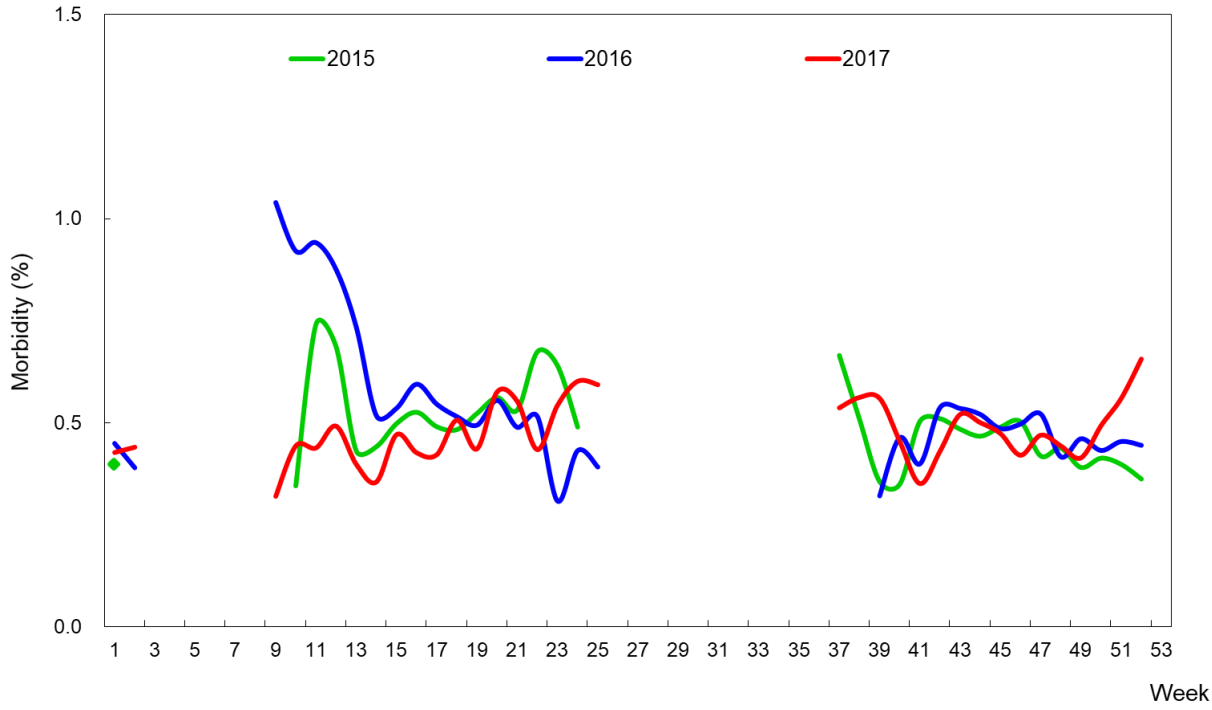
4. Fever

■ Case definition:

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

■ Epidemic analysis:

According to CDC school-based surveillance system, the morbidities of fever among schools were between 0.32% and 0.66% in 2017. The morbidities of week 50 to 52 in 2017 were higher than the same period of 2015 and 2016.



Note : Morbidity (%) = no. of sick students / no. of total students * 100%

Figure 7 Fever Morbidity Reported by the School-based Surveillance System, 2015-2017

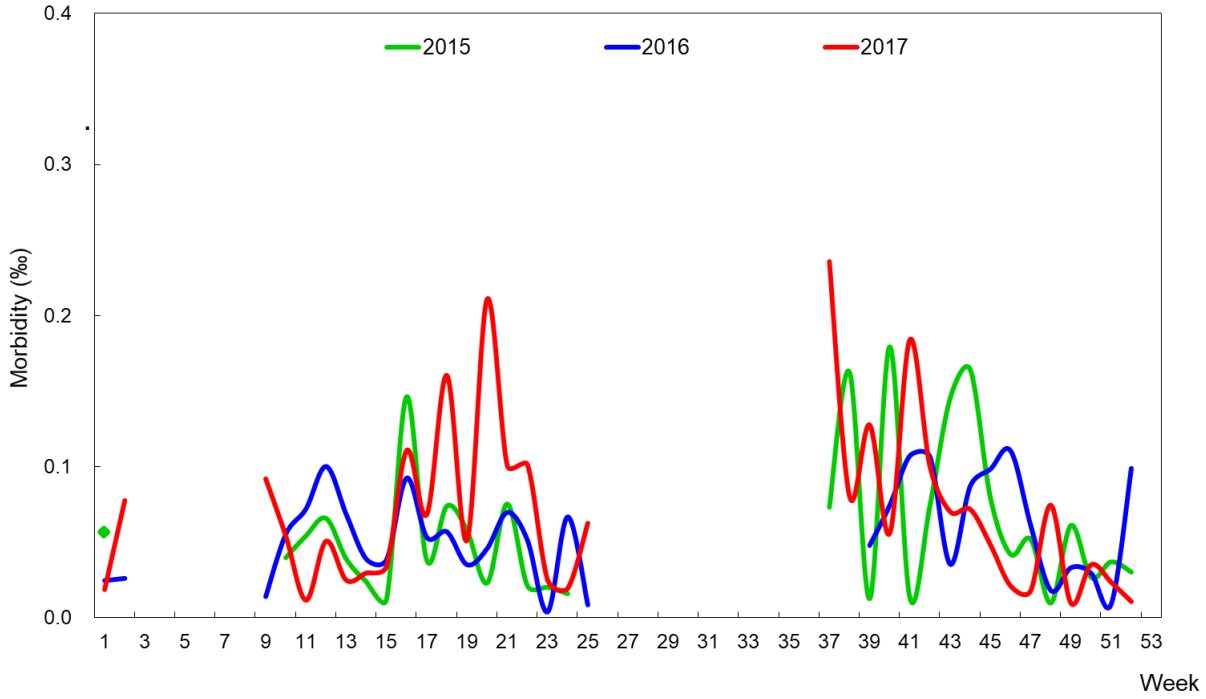
5. Acute hemorrhagic conjunctivitis (AHC)

■ 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 CDC school-based surveillance system, the morbidities of Acute hemorrhagic conjunctivitis (AHC) among schools were between 0.01‰ and 0.24‰ in 2017. The trend of AHC in 2017 was similar to the past two years.



Note : Morbidity (‰) = no. of sick students / no. of total students * 1000‰

Figure 8 AHC morbidity reported by the School-based Surveillance System, 2015-2017

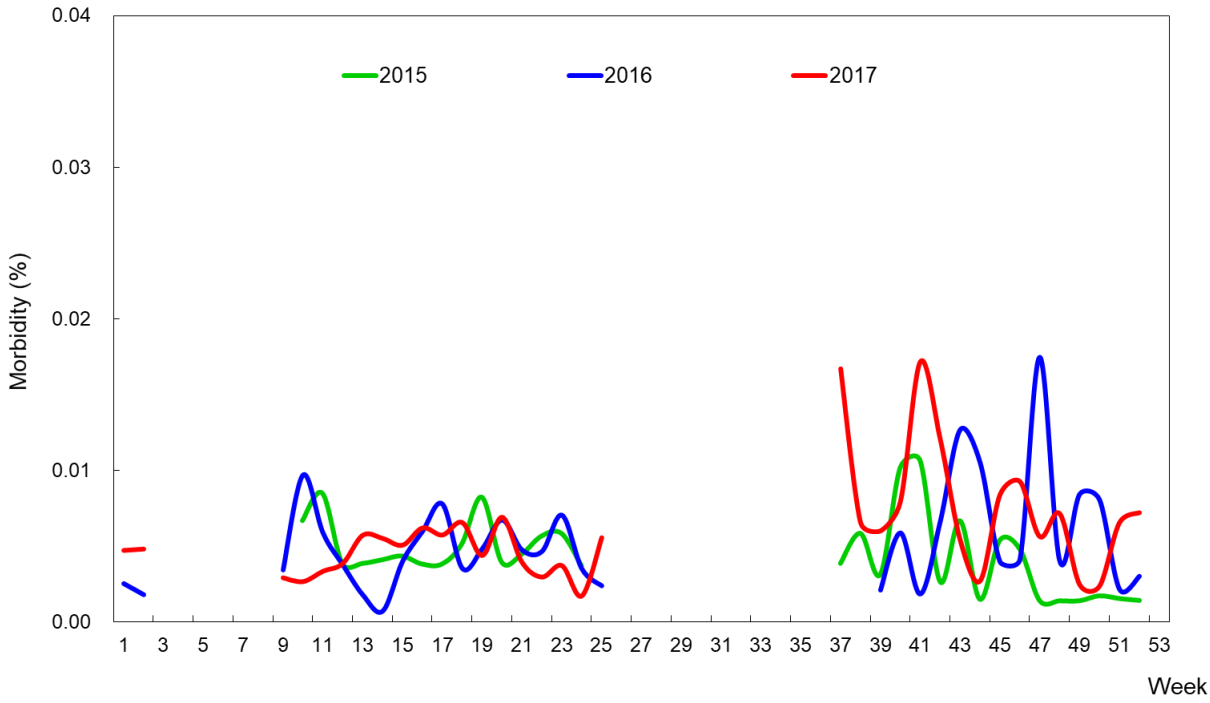
6. Varicella:

■ Case definition:

Appearance of blisters of all sizes throughout the whole body and may go along with fever as a potential clinical symptom.

■ Epidemic analysis:

According to CDC school-based surveillance system, the morbidities of varicella among schools were between 0.002% and 0.017% in 2017. The trend of Varicella in 2017 was similar to the past two years.



Note : Morbidity (%) = no. of sick students / no. of total students * 100%

Figure 9 Varicella morbidity reported by the School-based Surveillance System, 2015-2017

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 contract virology laboratories across Taiwan since March 1999 and endeavors to improve Taiwan's capacity for virus testing and cultivate professionals in the field. Currently, contract laboratories are playing an important role in the monitoring of enterovirus and influenza viruses in communities. The laboratory surveillance targets mainly the prevalent types of enterovirus and influenza viruses to shed light on 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

In 2017, there were a total of eight contracted laboratories for viral diseases across the country. Their locations and coverage areas are as follows: In northern Taiwan, National Taiwan University Hospital (coverage area: Taipei City, Kinmen County, and Lienchiang County), Linkou Chang Gung Memorial Hospital (coverage area: Taoyuan City, Hsinchu County, Hsinchu City and Miaoli County), Tri-Service General Hospital (coverage area: New Taipei City, Keelung City, Yilan County, and specimens from military hospitals); in central Taiwan, Taichung Veterans General Hospital (coverage area: Taichung City), Changhua Christian Hospital (coverage area: Changhua County, Yunlin County and Nantou County); in southern Taiwan, National Cheng Kung University Hospital (coverage area: Chiayi County, Chiayi City and Tainan City), Kaohsiung Chang Gung Memorial Hospital (coverage area: Kaohsiung City, Pingtung County, and Penghu County); and in eastern Taiwan, Buddhist Tzu Chi General Hospital (coverage area: Hualien County and Taitung County).

III. Sources of specimens and testing process

Sources of specimens at the contracted laboratories come mainly from outpatients, emergency and inpatients patients at medical centers within the areas covered by the laboratories, as well as from 150 specimen collection stations nationwide. Specimens are collected from patients with suspected influenza or enteroviral infections. The former should meet the criteria for influenza-like illness (symptoms including fever above 38°C, cough, sore throat or muscular pain; patients with mild rhinitis, tonsillitis, and bronchitis are excluded). The latter should be patients with hand-foot-mouth disease or herpangina, and their specimens should be collected within three days after the onset of illness. Generally, specimen collection stations send two specimens to the regional contracted laboratories every week.

1. Collection of specimens

Specimens collected by contract laboratories in 2017 totaled 11,665, which represents an average of 972 per month. The contracted laboratories in northern Taiwan received the largest number of specimens with 4,698 cases, whereas laboratories in eastern Taiwan received the fewest specimens with 1,309 cases.

2. Prevalence of enterovirus

In 2017, 802 strains of enterovirus were isolated. After typing by immunofluorescence assay (IFA), it was found the dominant type was Coxsackie virus A (575 strains or 71.7%), followed by Coxsackie virus B (55 strains or 6.9%), Echovirus (39 strains or 4.9%), Enterovirus Type 71 (16 strains or 2.0%), whereas 110 isolates (13.7%) were non-polio enterovirus (NPEV).

Among 575 strains of Coxsackievirus A isolated, the dominant types were CVA4 169 strains (29.4%) and CVA6 167 strains (29.1%). The majority of Coxsackievirus B isolated constituted type B5 21 strains (38.2%). Most of the Echovirus strains isolated were classified as type 6 26 strains (66.7%). (See Figure 10 Weekly enterovirus positive isolation rates in specimens collected by contract laboratories, 2017). After typing of NPEV by gene sequencing, it was found the majority of NPEV were Echovirus 5, followed by Echovirus 18, Enterovirus D68, CVA21, CVB3, Echovirus 3, and CVA2 in sequence.

To sum up, the top five types of enterovirus isolated in 2017 were CVA4 (21.1%), CVA6 (20.8%), CVA2 (18.5%), CVA9 (5%), and CVA6 (3.2%). (See Figure 11 Strain ratios of enterovirus isolates from specimens collected by the sentinel physicians, 2017).

3. Prevalence of influenza virus

In 2017, 1,932 strains of influenza virus were isolated, including 1,364 strains of influenza A subtype H3 (70.6%), 497 strains (25.7%) of type B and 71 strains of H1N1 (3.7%). influenza A subtype H3 was the most prevalent strain in 2017; during weeks 1-42 of the year, H3 was the most prevalent strains, followed by influenza B, whereas after week 21, influenza B became more prevalent (see Figure 12 Isolation situations of influenza viruses from specimens collected by the sentinel physicians, 2017).

After typing of isolated virus strains by gene sequencing, it was found that of seasonal influenza A viruses, all H1N1 subtype viruses were predominantly A/Michigan/45/2015, while the rest were A/California/07/2009 and H3N2 subtype were predominantly A/Hong Kong/4801/2014, while the rest were A/Singapore/INFIMH-16-0019/2016. Of the influenza B viruses, B/Phuket/3073/2013 (B/Yam) was the dominant type and some were B/Brisbane/60/2008 (B/Vic), whereas a few were B/Massachusetts/02/2012 (B/Yam).

To sum up, influenza virus types isolated in 2017 were in sequence NFAH3 (70.6%), INFB (25.7%), and H1N1（3.7%）(see Figure 13 Strain ratios of influenza virus isolates from specimens collected by the sentinel physicians, 2017).

4. Epidemic situations of other respiratory tract viruses

Respiratory tract viruses other than influenza virus isolated totaled 1,489 cases, including Adenovirus 813 strains (54.6%), Parainfluenza virus 306 strains (20.6%), Herpes simplex virus (HSV) 259 strains (17.4%), Respiratory syncytial virus (RSV) 83 strains (5.6%), and Cytomegalovirus (CMV) 28 strains (1.9%) (see Figure 14 Positive isolation rates for respiratory tract viruses from specimens collected by the sentinel physicians, 2017).

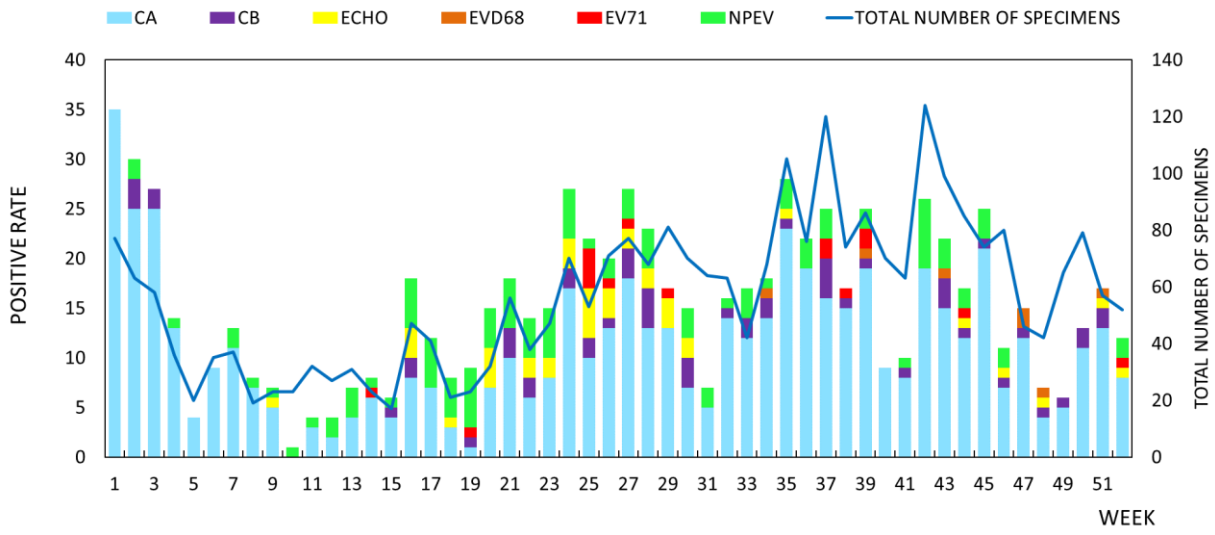


Figure 10 Enterovirus positive isolation rates in specimens collected by the sentinel physicians, 2017

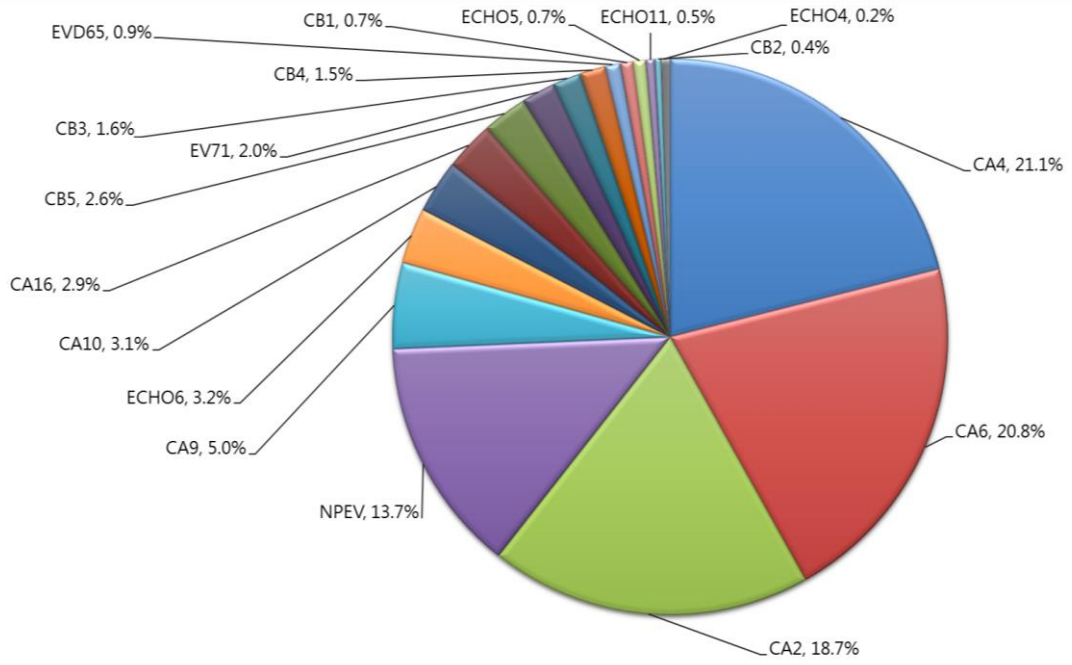


Figure 11 Strain ratios of enterovirus isolates from specimens collected by the sentinel physicians, 2017

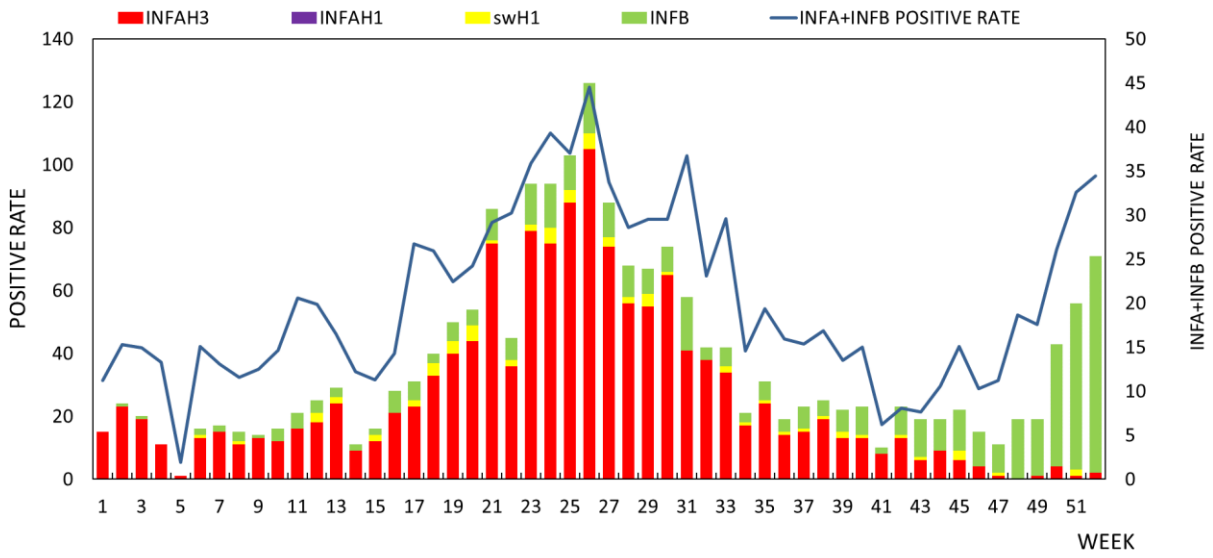


Figure 12 Isolation situations of influenza viruses from specimens collected by the sentinel physicians, 2017

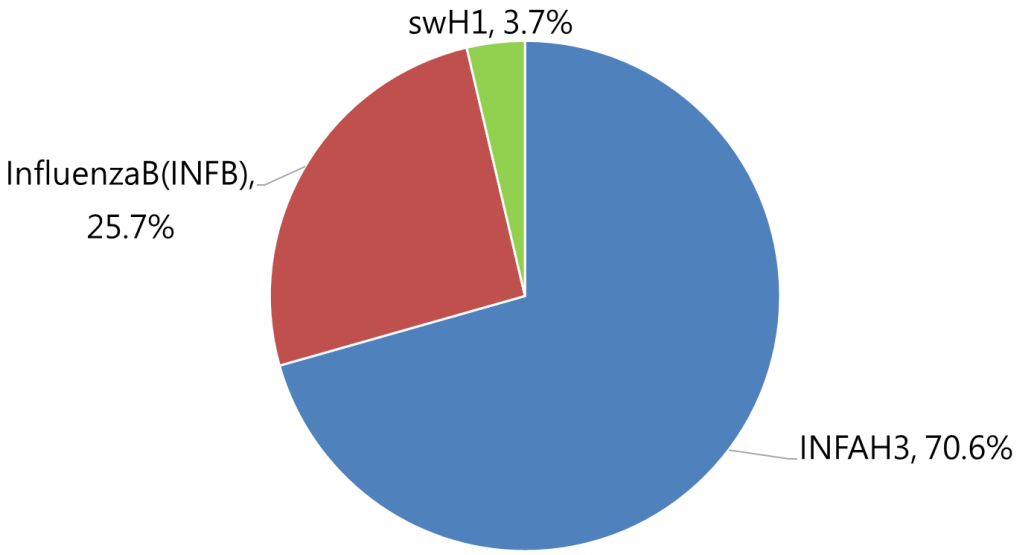


Figure 13 Strain ratios of influenza virus isolates from specimens collected by the sentinel physicians, 2017

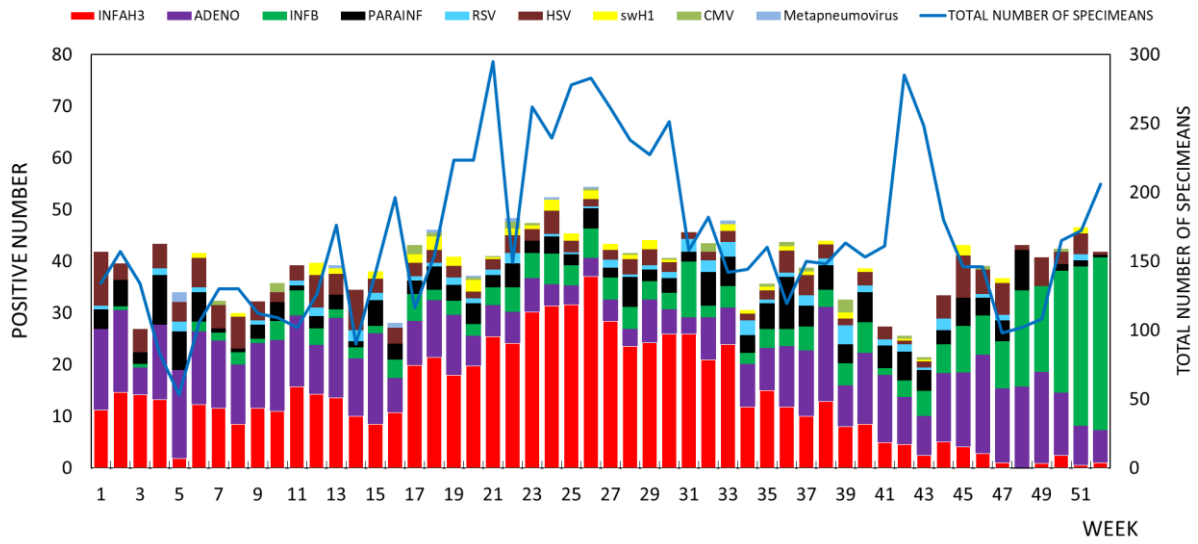


Figure 14 Positive isolation rates for respiratory tract viruses from specimens collected by the sentinel physicians, 2017

Quarantine Surveillance

I. Health examination of foreign workers

To prevent the importation of infectious diseases by foreign workers affecting the health of the population, all legally imported workers are required to submit a health certificate issued by an authorized foreign hospital before applying for an entry visa. They are also required to undergo health examination at a designated hospital within 3 working days after entry and within 30 days before or after the days of 6, 18 and 30 months of the employment permit effective date in order to ensure their health condition. The designated items of health examination for foreign workers in 2017 include chest X-ray examination for tuberculosis, examination for Hansen's disease, serological test for syphilis, stool examination for intestinal parasites, and physical examination. In addition, either proof of positive antibody or vaccination certificate for measles and rubella is required in the health examination conducted in the authorized hospitals.

To prevent the importation of typhoid fever by Indonesian workers, symptoms query of typhoid fever has been included in the health examination before entry since October 15, 2009. Besides, symptoms query and stool culture examination of typhoid fever have also been included in the health examination within 3 working days after entry in the meanwhile.

Within 772,848 person-times health examinations for foreign workers conducted in Taiwan in 2017, 5,770 person-times were failed, representing a failed rate of 0.75%. Stool examination for intestinal parasite accounted for the highest failed rate with 0.68% (5,230 person-times), followed by chest X-ray examination for tuberculosis with 0.07% (436 person-times) (Table 15).

II. Health declaration of inbound passengers

To prevent the imported infectious disease 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-up and surveillance of suspect passengers with symptoms. 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 2017, the person times of inbound passengers was 26,396,941 in total and 26,707 of them showing symptoms were then subject to follow-up and surveillance by local health authority. The “Communicable Disease Survey Form” and body temperature screening measures have identified 154 cases of dengue fever, 8 cases of chikungunya fever, and 2 cases of Zika virus infection cases. (Table 16)

Table 15 Physical examinations status of foreign labors, 2017

Unit：Number of Persons, Person Time, %

Country	Number of Persons		Failed	X-ray	Syphilis	Parasites	Hansen's disease	Mental condition	Others
Thailand	At Entry	21,168	204	12	3	190	-	-	-
			0.96%	0.06%	0.01%	0.90%	-	-	-
	Periodic	59,253	336	22	5	309	-	-	-
			0.57%	0.04%	0.01%	0.52%	-	-	-
Indonesia	At Entry	57,528	558	23	15	521	-	-	-
			0.97%	0.04%	0.03%	0.91%	-	-	-
	Periodic	221,573	1,241	157	45	1,036	3	-	-
			0.56%	0.07%	0.02%	0.47%	0.00%	-	-
Philippines	At Entry	40,159	682	15	4	663	-	-	-
			1.70%	0.04%	0.01%	1.65%	-	-	-
	Periodic	140,179	677	93	16	568	-	-	-
			0.48%	0.07%	0.01%	0.41%	-	-	-
Vietnam	At Entry	65,935	990	35	4	953	-	-	-
			1.50%	0.05%	0.01%	1.45%	-	-	-
	Periodic	167,041	1,081	79	13	989	-	-	-
			0.65%	0.05%	0.01%	0.59%	-	-	-
Others	At Entry	7	-	-	-	-	-	-	-
			-	-	-	-	-	-	-
	Periodic	5	1	-	-	1	-	-	-
			20.00%	-	-	20.00%	-	-	-
Total	At Entry	184,797	2,434	85	26	2,327	-	-	-
			1.32%	0.05%	0.01%	1.26%	-	-	-
	Periodic	588,051	3,336	351	79	2,903	3	-	-
			0.57%	0.06%	0.01%	0.49%	0.00%	-	-
Total(Person Time**)**		772,848	5,770	436	105	5,230	3	-	-
			0.75%	0.06%	0.01%	0.68%	0.00%	-	-

Note: The data of physical examination at entry was provided by the Ministry of Labor; the data of periodic physical examination was provided by the local health competent authorities.

Table 16 Statistic of CDC "Communicable Diseases Survey Form" in 2017

Unit：Number of Person Time

Month	Person time of inbound passengers	Cases with symptom		Cases sample taking			Traveling country
		Case No.	Case percentage (%)	Case No.	Notifiable disease	Notifiable disease Case No.	
Jan.	2,004,645	2,167	0.11	206	Dengue fever	14	Indonesia, Cambodia, Thailand, Malaysia, Maldives, Vietnam
Feb.	1,998,124	2,045	0.10	343	Dengue fever	9	Indonesia, Malaysia, Vietnam, Singapore, Myanmar, Philippines
					Chikungunya fever	1	
Mar.	2,149,516	1,755	0.08	265	Dengue fever	6	Ecuador, Indonesia, Malaysia, Vietnam
					Chikungunya fever	1	
Apr.	2,265,577	2,053	0.09	295	Chikungunya fever	1	Indonesia
May.	2,169,279	2,200	0.10	304	Dengue fever	6	Indonesia, Thailand, Malaysia, Maldives, Philippines
Jun.	2,193,481	2,634	0.12	461	Dengue fever	11	Malaysia, Philippines, Vietnam, Singapore, Myanmar
					Chikungunya fever	1	
Jul.	2,319,534	3,361	0.14	498	Dengue fever	23	China, Indonesia, Cambodia, Thailand, Malaysia, Philippines, Vietnam, Singapore
					Zika virus	1	
					Chikungunya fever	1	
Aug.	2,319,620	2,904	0.13	567	Dengue fever	25	Indonesia, Thailand, Malaysia, Philippines, Vietnam, Myanmar
					Chikungunya fever	2	
Sep.	2,065,887	1,862	0.09	368	Dengue fever	13	Malaysia, Vietnam, Philippines, Thailand, Myanmar, India
					Zika virus	1	
					Chikungunya fever	1	
Oct.	2,319,110	1,849	0.08	384	Dengue fever	20	India, Thailand, Vietnam, Singapore, Myanmar
Nov.	2,277,595	1,561	0.07	255	Dengue fever	16	Indonesia, India, Philippines, Vietnam, Singapore, Myanmar
Dec.	2,314,573	2,315	0.10	284	Dengue fever	11	Thailand, Malaysia, Philippines, Vietnam, Singapore
Total	26,396,941	26,707	0.10	4,231	Dengue fever	154	
					Zika virus	2	
					Chikungunya fever	8	

Note : 1. The data of inbound passenger number was provided by Taiwan National Immigration Agency.

2. The data of cases with symptom was provided by Taiwan CDC National Symptom Surveillance System.

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 2017 finds the following: the health bureaus of all counties and cities conducted 35,226 wards/villages, including 20,839 wards/villages in Level 0, 10,772 wards/villages in Level I, 2,420 wards/villages in Level II, 944 wards/villages in Level III, 184 wards/villages in Level IV, 32 wards/villages in Level V, 21 wards/villages in Level VI, 1 wards/village in Level VII, and 13 wards/villages in Level VIII (Table 17). The number of wards/villages above Level II in the range of 3.2%~21.0% displayed one peak from June to September (Figure 15).

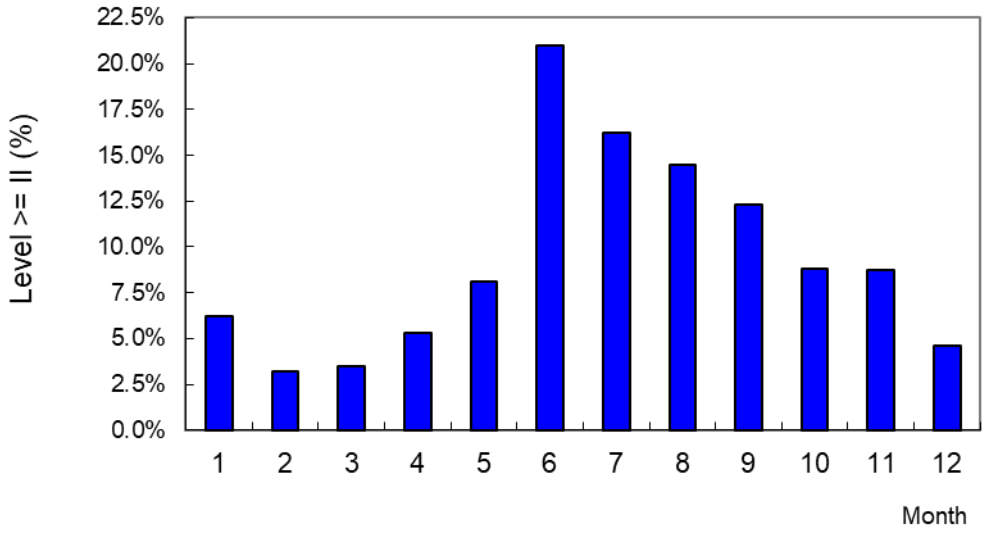


Figure 15 The percentage of wards/villages with Dengue fever vector by month in 2017

Table 17 Distribution of Breteua index, 2017

Locality	Villages (No. of times)	Breteua Index								
		0	1	2	3	4	5	6	7	8
Taichung City	1,260	547	692	21	-	-	-	-	-	-
Taipei City	1,331	742	542	42	5	-	-	-	-	-
Taitung County	861	573	271	15	2	-	-	-	-	-
Tainan City	5,770	3,242	1,728	484	245	53	14	4	-	-
Yilan County	1,117	932	184	1	-	-	-	-	-	-
Hualien County	1,086	940	115	28	3	-	-	-	-	-
Kinmen County	78	68	10	-	-	-	-	-	-	-
Nantou County	881	425	437	19	-	-	-	-	-	-
Pingtung County	3,431	1,525	1,219	450	180	48	4	5	-	-
Miaoli County	532	110	372	50	-	-	-	-	-	-
Taoyuan County	967	387	543	28	7	2	-	-	-	-
Kaohsiung City	6,116	1,830	2,608	1,125	451	64	13	11	1	13
Keelung City	375	333	20	22	-	-	-	-	-	-
Yunlin County	754	656	97	1	-	-	-	-	-	-
New Taipei City	3,329	2,534	783	10	2	-	-	-	-	-
Hsinchu City	326	181	137	7	1	-	-	-	-	-
Hsinchu County	741	624	109	5	3	-	-	-	-	-
Chiayi City	1,562	1,195	337	18	10	2	-	-	-	-
Chiayi County	1,692	1,651	41	-	-	-	-	-	-	-
Changhua County	1,165	747	369	48	-	1	-	-	-	-
Penghu County	1,852	1,597	158	46	35	14	1	1	-	-
Total	35,226	20,839	10,772	2,420	944	184	32	21	1	13

II. Malaria vector mosquitoes

In 2017 mosquito light traps were hanged for collection of adult mosquitoes in 39 townships and 133 villages, including Zuozhen Dist., Nanhua Dist., Xinhua Dist., Nanxi Dist., Longqi Dist. and Guanmiao Dist. in Tainan City; Checheng Township, Shizi Township and Manzhou Township in Pingtung County; Sanxin Township, Datong Township, Wujie Township, Dongshan Township, Zhuangwei Township, Yilan city, Nanao Township, Yuanshan Township, Toucheng Township, Jiaoxi Township, Luodong Township and Suao Township in Yilan County; Dawu Township, Taimali Township, Taitung City, Chenggong Township, Chishang Township, Beinan Township, Yanping Township, Donghe Township, Jingfeng Township, Changbing Township, Hairui Township, Daren Township, Luyeh Township, Ludao Township, Guanshan Township and Lanyu Township in Taitung County; Yuli Township and Fuli Township in Hualien County. The survey result showed that 7 townships and 9 villages had collected adult *An. minimus* (Table 18 and Figure 16). Chengshan Village of Zuozhen Dist. in Tainan City had the highest density with the record of catching 19 *An. minimus* per trap-night in September.

Table 18 The number of adult mosquitoes of *Anopheles minimus* collected in 2017

County / Township		*An. minimus* (No.)	Villages (No.)	Villages with *An. minimus*
Pingtung County	Checheng	1	1	Haikou
	Manzhou	1	1	Gangzai
Tainan City	Longqi	3	3	Longchuan、Qiding、Niupu
	Zuozhen	39	1	Chengshan
	Guanmiao	1	1	Budai
Taitung County	Chenggong	4	1	Bo'ai
	Donghe	1	1	Donghe
Total	**7 townships**	**50**	**9**	

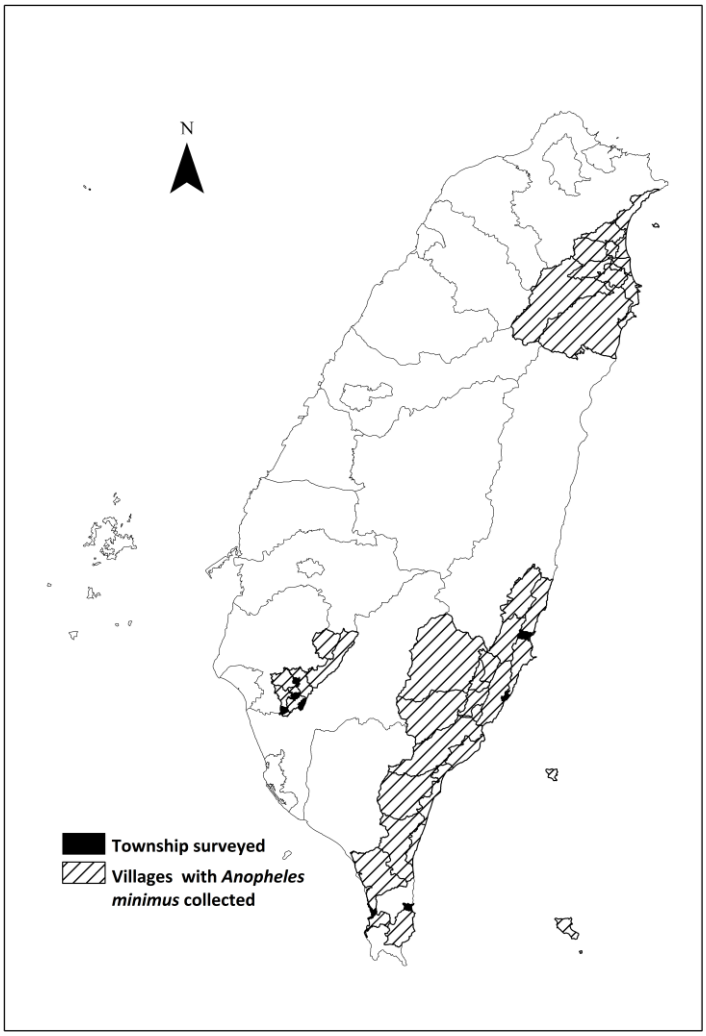


Figure 16 Distribution of *Anopheles minimus*, 2017

Symptom Surveillance System

I. Introduction

Severe acute respiratory syndrome (SARS), a global health alert beginning in March 2003, also affected Taiwan and caused public panic and unprecedentedly crippled the economy. In December of the same year, avian influenza had spread across Korea, Japan and Vietnam. Since then, countries around the world reported several high/low pathogenic avian influenza (HPAI/LPAI) outbreaks. Based on the concept of disease clusters with similar clinical symptoms, Centers for Disease Control implemented the Symptom Surveillance System in 2003, in order to detect the emergence or unusual trends of infectious diseases, and take control measures promptly. Health authorities report to the system while individuals of a cluster develop similar symptoms that follow the reporting criteria. In addition, the system boosted the capacity for monitoring imported diseases and report symptomatic cases by quarantine stations at ports of entry.

The occurrence of emerging outbreaks of the 2009 H1N1 influenza pandemic, human infections with novel influenza viruses, such as influenza A (H7N9) and A (H5N1), and Middle East Respiratory Syndrome Coronavirus attracted worldwide concerns and caused considerable panic worldwide. We update the monitored symptoms if needed. The followings are the symptoms of diseases to be reported currently: influenza-like illness, diarrhea, upper respiratory infection, fever of unknown origin, patients with coughing lasting for more than three weeks, enterovirus and varicella.

II. Objectives of surveillance system

1. Strengthen the surveillance of inbound travelers.
2. Control cluster events effectively.
3. Achieve early detection, prevention and treatment of infectious diseases.

III. Reporting method and data analysis

Public health authorities or quarantine officers of the CDC should report these suspected cluster events within their jurisdictions. In addition, the quarantine officers of the CDC should report individual suspected case who meets the case definitions. Internet is the main way to report. If it is not available, reporting in paper form and faxing to the CDC divisions is acceptable.

Public health officers of local authorities and CDC are able to access data of reports, specimen submission forms and test results in the system through BO (Business Objects) for analysis.

IV. Description of reportable diseases

■ Influenza-like illness (ILI) clustering

1. Case definition: Patients with influenza-like illness and includes criteria for person, time and place that are suspected as a cluster with spreading concern.

※ Definition of influenza-like illness for reporting purpose: The patients should meet all the following conditions:

(1) Sudden onset, with fever (tympanic temperature≧38°C) and respiratory tract infection;

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

(3) Runny nose, tonsillitis and bronchitis (common cold) should be excluded.

2. Epidemic analysis of ILI clusters: In 2017, a total of 274 clusters of influenza-like illness were reported. Laboratory confirmed clusters included 1 event of A (H1N1) infection, 97 events of A (H3N2) infection, 14 events of influenza B infection, 2 events of A (H1N1) and A (H3N2) co-infection, 5 events of A (H3N2) and influenza B co-infection, 118 events of Influenza viruses (RIDTs) and 2 events of other pathogens infection (including 1 event of RSV infection, 1 event of adenovirus infection). The other events were negative or had no specimens taken. Populous institutions had the highest number of influenza-like illness clusters, followed by schools, hospitals, military camps, others, and tour groups.

Table 19 Test results for influenza-like illness clustering incidents in 2017

No. of Clusters	Test results								
	Influenza A (H1N1) viruses	Influenza A (H3N2) viruses	Influenza B viruses	Influenza A (H1N1) + A(H3N2) viruses	Influenza A (H3N2) + B viruses	Influenza viruses (RIDTs*)	Others**	Negative	No specimen
274	1	97	14	2	5	118	2	10	25

Note:* Rapid influenza diagnostic tests, include 104 events of influenza A (RIDTs), 13 events of influenza B (RIDTs), 1 event of influenza A and influenza B (RIDTs).

** Include 1 event of RSV infection, 1 event of adenovirus infection.

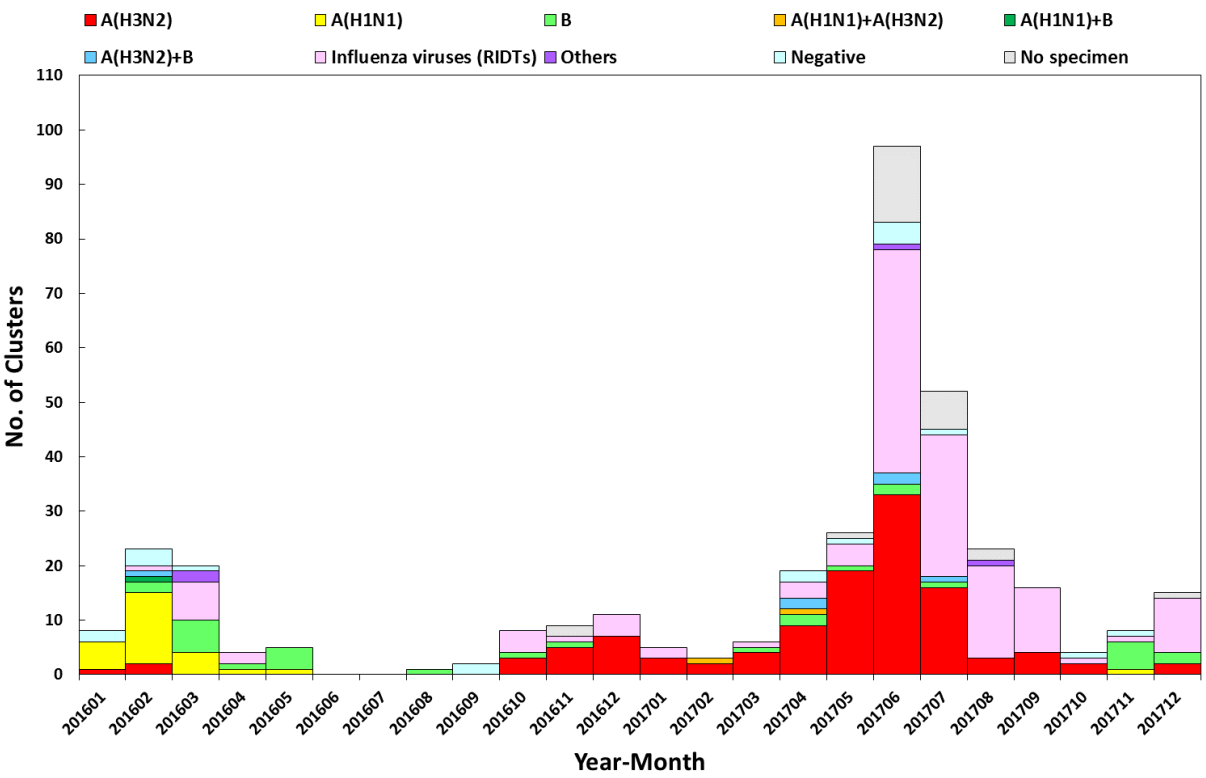


Figure 17 Evolutional trends of influenza-like illness clustering incidents in 2016-2017

Table 20 Distribution of clusters of influenza-like illness cases (by location) in 2017

Institution categories	No. of Clusters
populous institutions	119
schools	117
hospitals	27
military camps	7
others	3
tour group	1
Total	274

■ Diarrhea clustering

1. Case definition : patients with intestinal symptoms and criteria for person, time and place that are suspected as cluster infection with the concern of spreading.

※ Intestinal symptoms : Diarrhea three times or more a day, and accompanied by vomiting or fever, or mucus or blood-tinged in stools, or watery diarrhea

※ Patients of suspected food poisoning events that report to product management distribution system (PMDS) and obtained the event ID, are able to submit specimens through reporting to the Symptom Surveillance System.

※ Specimens of a suspected cluster event can only be collected and sent for tests once; the number of specimens collected for the tests for bacterial and viral pathogens is limited to eight. However, cluster investigations conducted by TCDC FETP is not subject to the aforementioned rules.

2. Epidemic analysis of diarrhea clusters : In 2017, a total of 575 diarrhea cluster events were reported. Clusters that were tested positive include 345 events of Norovirus infection, 63 events of Norovirus and Rotavirus co-infection, 41 events of Rotavirus infection, and 45 events of other pathogens infection (the major causes were *Salmonella, Bacillus cereus, Vibrio parahaemolyticus* and *Staphylococcus aureus*). The other events were negative or had no specimens taken. Schools had the highest number of diarrheal clusters, followed by hospitality industry, others (including business places, family, dormitory and camp), populous institutions, tour groups, military bases, and hospitals.

Table 21 Test results for diarrhea clustering incidents in 2017

No. of Clusters	Test results					
	Norovirus	Norovirus and Rotavirus	Rotavirus	Others*	Negative	No specimen
575	345	63	41	45	75	6

Note: *Include 16 events of Bacillus cereus infection, 13 events of *Vibrio parahaemolyticus* infection, 10 events of *Staphylococcus aureus* infection, 4 events of *Salmonella* infection, 1 event of *Bacillus cereus* and *Staphylococcus aureus* co-infection; 1 event of adenovirus infection.

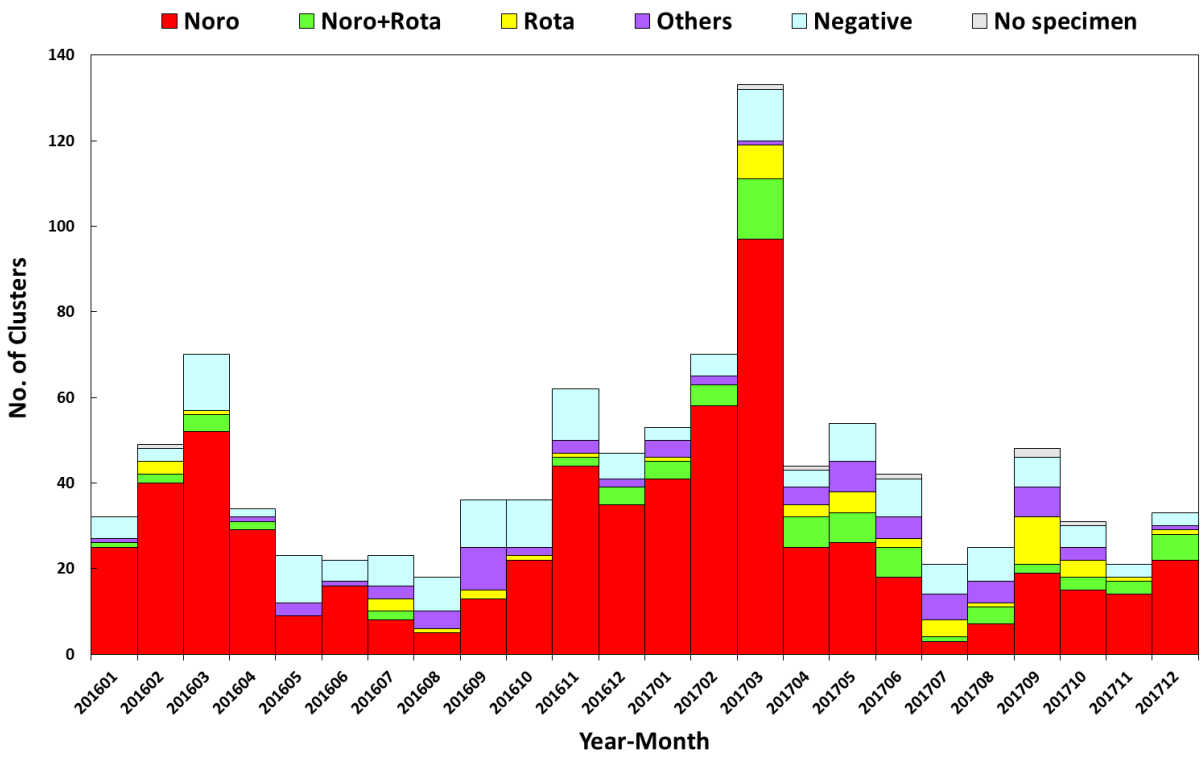


Figure 18 Evolutional trends of diarrhea clustering incidents in 2016-2017

Table 22 Distribution of clusters of diarrhea cases (by location) in 2017

Institution categories	No. of Clusters
schools	308
hospitality industry	124
others	54
populous institutions	36
tour groups	26
military camps	16
hospitals	11
total	575

■ Upper respiratory tract infection (URI) clustering

1. Case definition : Patients with symptoms of upper respiratory tract infection and includes criteria for person, time and place that are suspected as cluster infection with the concern of spreading.

2. Epidemic analysis of URI clusters : In 2017, a total of 358 URI cluster events were reported. Clusters that were tested positive include 5 events of A (H1N1) infection, 200 events of A (H3N2) infection, 32 events of influenza B infection, 1 event of A (H1N1) and influenza B co-infection, 6 events of A (H3N2) and influenza B co-infection, 38 events of influenza viruses (RIDTs) infection, and 28 events of other pathogens infection (the major causes were RSV and adenovirus infection). The other events were negative or had no specimens taken. Schools had the highest number of URI clusters, followed by populous institutions, hospitals, military camps, others and tour groups.

Table 23 Test results for upper respiratory tract infection clustering incidents in 2017

No. of Clusters	Test results								
	Influenza A (H1N1) viruses	Influenza A (H3N2) viruses	Influenza B viruses	Influenza A (H1N1) + B viruses	Influenza A (H3N2) + B viruses	Influenza viruses (RIDTs*)	Others**	Negative	No specimen
358	5	200	32	1	6	38	28	38	10

Note:* Rapid influenza diagnostic tests, include 34 events of influenza A (RIDTs), 2 events of influenza B (RIDTs), 2 events of influenza A and influenza B (RIDTs).

** Include 15 events of adenovirus infection, 10 events of RSV infection, and 3 events of enterovirus infection.

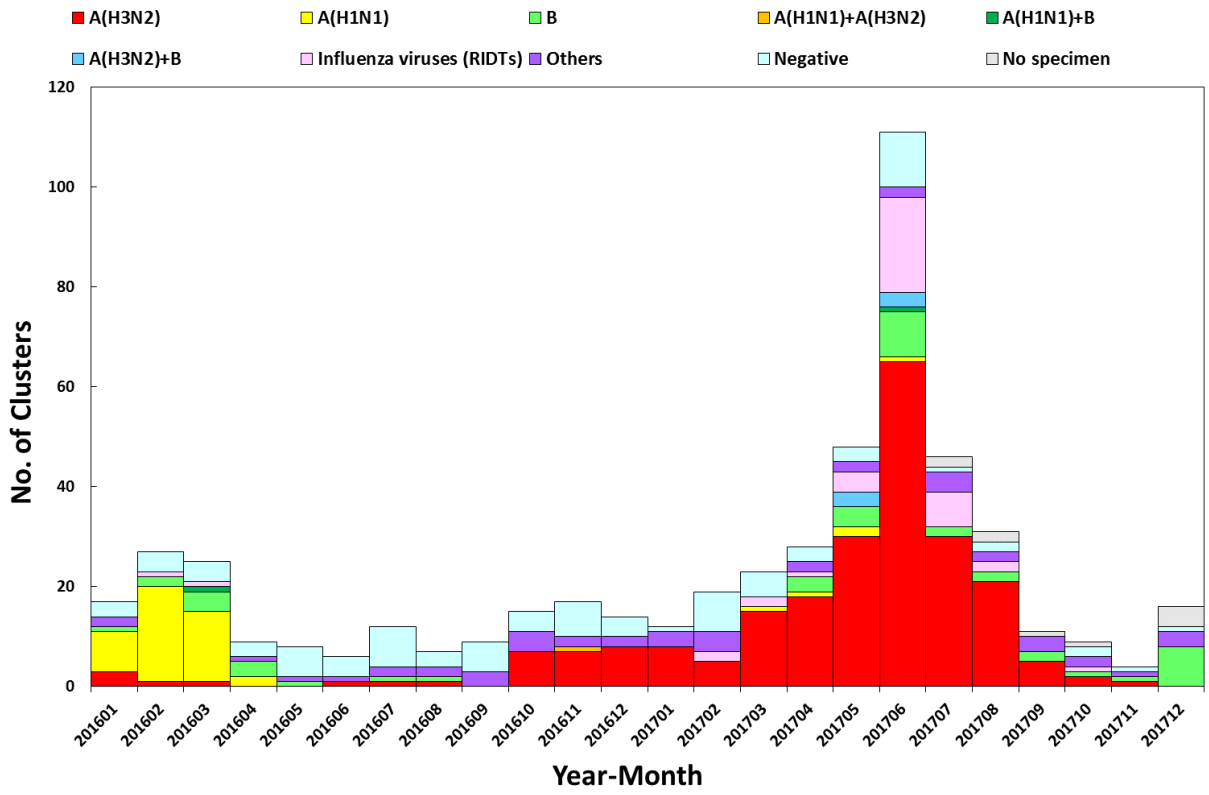


Figure 19 Evolutional trends of upper respiratory tract infection clustering incidents in 2016-2017

Table 24 Distribution of clusters of upper respiratory tract infection cases (by location) in 2017

Institution categories	No. of Clusters
schools	165
populous institutions	135
hospitals	45
military camps	8
others	3
tour groups	2
total	358

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■ Fever of unknown origin (FUO) clustering

1. Case definition: Patients with fever of unknown cause and includes criteria for person, time and place that are suspected as cluster infection with the concern of spreading.
2. Epidemic analysis of FUO clusters: In 2017, a total of 11 events of fever of unknown origin cluster were reported. Clusters that were tested positive include 5 events of influenza A (H3N2) infection, 1 event of influenza B, 1 event of influenza A (RIDTs), and 1 event of adenovirus infection. The other events were negative. Populous institutions had the highest number of FUO clusters, followed by schools and hospitals.

■ Clustering of patients with coughing lasting more than three weeks

1. Case definition: Patients with coughing lasting more than three weeks and includes criteria for person, time and place 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 was no cluster of patients with coughing lasting more than three weeks reported in 2017.

■ Enterovirus clustering

1. Case definition: Patients and their contacts who are among high risk groups for enterovirus infection with severe complications, involved in a suspected cluster of enterovirus infection in places such as nurseries and neonatal wards in hospitals, baby care centers and homes of puerperal care, excepting schools. Officers at local Department of Health and Regional Center of CDC are responsible for collecting specimens from selected patients and submit to Research and Diagnostic Center, CDC.
2. Epidemic analysis of enterovirus clusters: In 2017, a total of 8 events of enterovirus clusters were reported. Cluster that was tested positive include 1 event of Enterovirus 71 infection, 3 events of Coxsackie A6 infection, 1 event of Coxsackie A10 infection. The other events were negative or had no specimens taken. Populous institutions had the highest number of Enterovirus clusters, followed by hospitals.

■ Varicella clustering

1. Case definition: A suspected varicella cluster of patients developing acute exacerbation of papules and blisters symptoms that occurs in populous institutions such as ships, aircraft, preschools, schools, barracks, prisons, etc. and includes criteria for person, time and place that with the concern of spreading.
2. Epidemic analysis of varicella clusters: In 2017, a total of 65 events of varicella cluster were reported. Schools had the highest number of varicella clusters, followed by others (including business places and tutoring center), populous institutions, and military camps.

Table 25 Distribution of clusters of varicella cases (by location) in 2017

Institution categories	No. of Clusters
schools	54
others	7
populous institutions	3
military camps	1
total	65

Real-time Outbreak and Disease Surveillance System

I. Purpose of surveillance

Through the “Real-time Outbreak and Disease Surveillance (RODS)” system, 181 responsibility hospitals nationwide automatically transfer ICD-10-CM (International Classification of Diseases, Clinical Modification, Tenth 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 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 2017 include routine surveillance of acute hemorrhagic conjunctivitis in addition to the reportable items in 2007.

II. Data analysis methods

The 181 responsibility hospitals across the country 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, ICD-9-CM and ICD-10-CM medical diagnosis code. Taiwan CDC compiles and analyzes RODS data weekly, determines the trends in the prevalence of diseases, produces statistical charts and posts them on the website

III. Findings

■ Enterovirus

Epidemic analysis:

Enterovirus infections are generally most prevalent between April and October every year in Taiwan. The epidemics in 2017 which had one uptrend in September to November was slightly less prevalent than that in 2016. Based on the 2017 emergency enterovirus infection surveillance data, the emergency room visit rate of enterovirus infections throughout the year ranged from 0.70‰ to 10.67‰, which was lower than 2017 (0.64‰ to 16.28‰). The epidemic condition peaked up starting in May and peaked in October, but the peak was lower than those in previous years.【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 2016, the emergency room visit rate for influenza-like illness ranged from 7.63% to 19.25%, which was higher than the surveillance figures in 2016 (7.56% to 30.64%), and the peak was also lower than 2016. The emergency room visits started to raise at the beginning of the year and reached a peak in early February when most hospitals and clinics closed their outpatient services during the Chinese New Year holiday. The emergency room visit rates declined gradually afterward the holiday, but in July after the second peak gradually slowed until August began to reach stability, in the beginning of December, once again slowly rising.【Note: percentage of influenza-like illness = (person-time of emergency room influenza-like illness cases / total person-time of emergency room cases) *100%】

■ **Acute diarrhea**

Epidemic analysis:

In 2017, the emergency room visit rate for acute diarrhea ranged from 3.07% to 8.62%, which was gentler than that in 2016 (3.10% to 10.36%). The epidemic at the end of last year continued onto the beginning of 2017, and after peaking in early February to late March, it gradually slowed. Diarrhea epidemic typically reaches its peak before and after the Chinese New Year. Based on the 7-day moving average chart of acute diarrhea visit rate, the prevalence of the disease in 2017 reached its peak during the Chinese New Year, and emergency room visits leveled off afterwards as hospitals and clinics opened their outpatient services after the holiday. There was an abrupt spike in October and then declined. 【Note: percentage of acute diarrhea visits= (person-time of emergency room acute diarrhea cases / total person-time of emergency room cases) *100%】

■ **Acute Hemorrhagic Conjunctivitis**

Epidemic analysis:

In 2017, the emergency room visit rate for conjunctivitis ranged from 0.60‰ to 6.26‰, which was similar with that in 2016 (0.68‰ to 5.93‰). Based on the 7-day moving average chart of conjunctivitis visit rate, the emergency room visits showed a peak in late-January during the Chinese New Year holiday, which was higher than last year and then leveled off afterward the holiday. The emergency room visit rate for conjunctivitis in 2017 showed a similar trend as that in 2016 after the peak season.【Note: permillage of acute hemorrhagic conjunctivitis visits = (person-time

of emergency room acute hemorrhagic conjunctivitis cases / total person-time of emergency room cases) *1000‰】

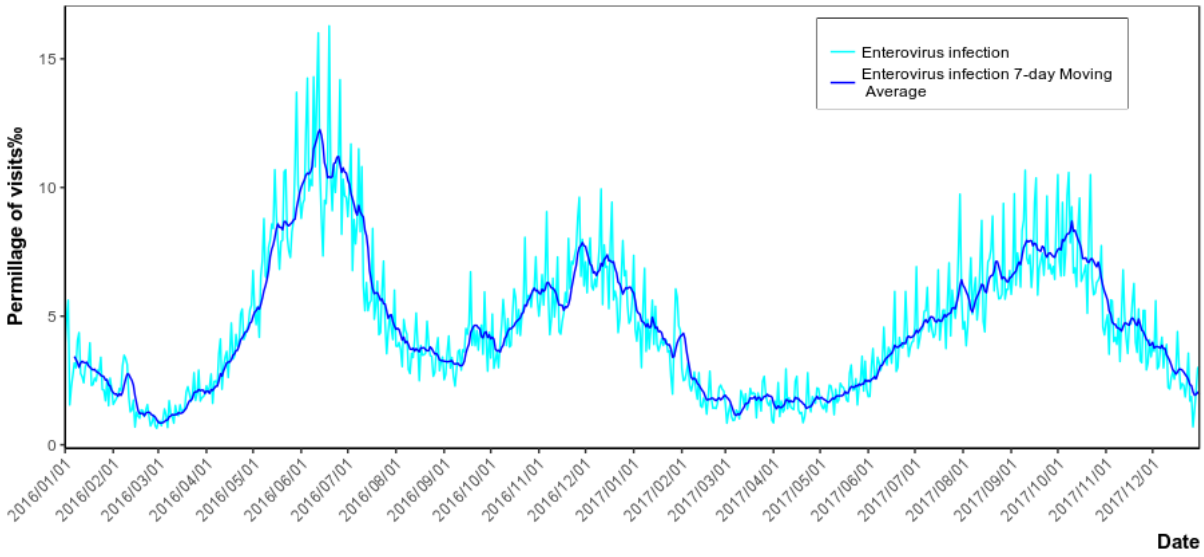

Figure 20 Daily Permillage of Emergency Department of Enterovirus Visits & 7-day Moving Average

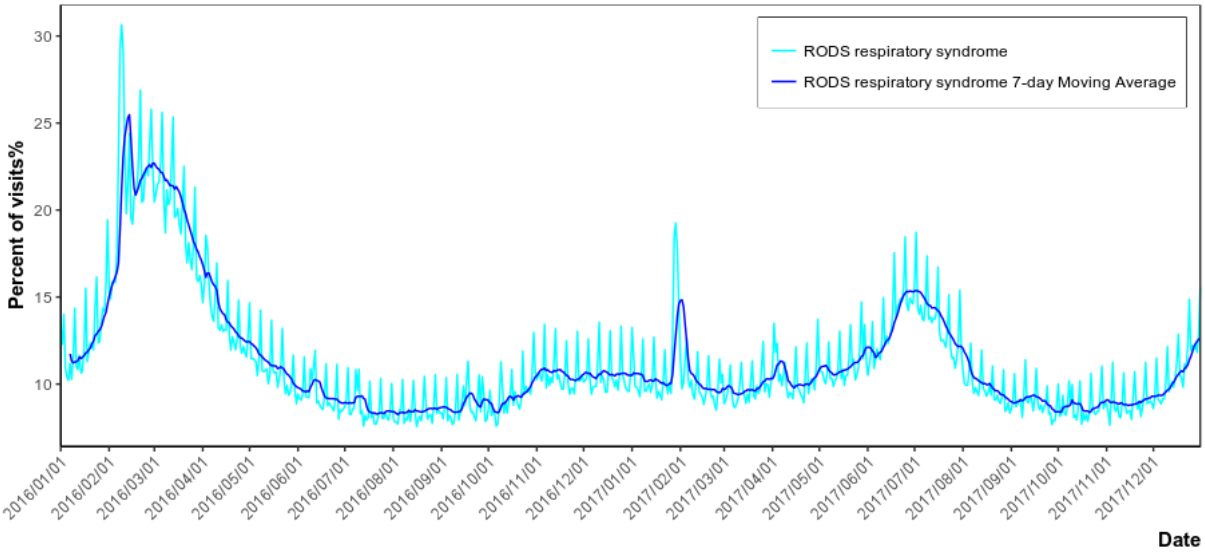

Figure 21 Daily Percentage of Emergency Department of Respiratory Visits & 7-day Moving Average

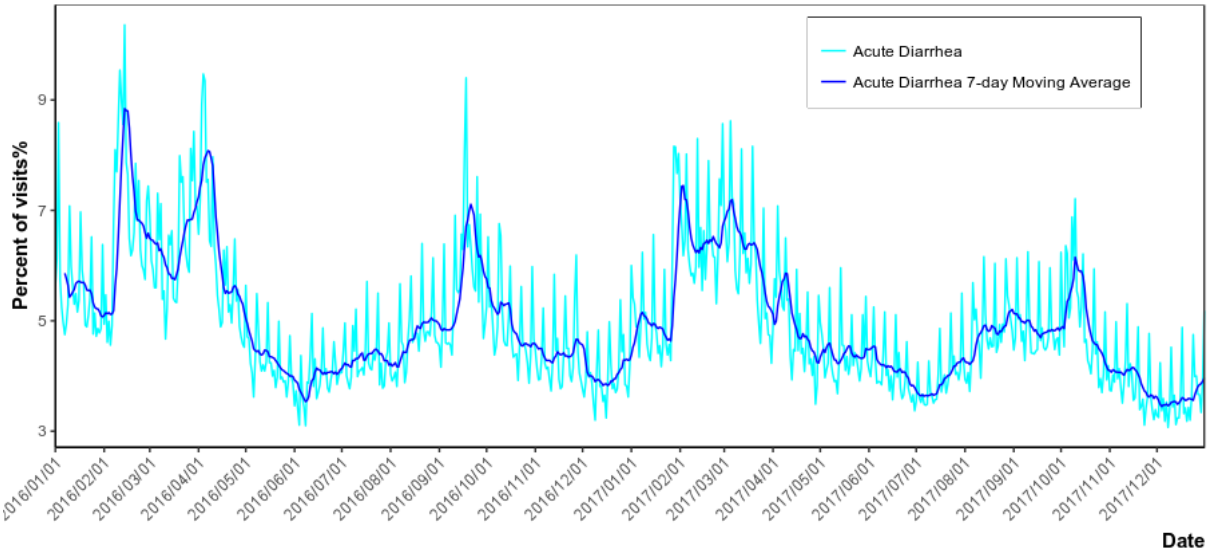

Fig 22 Daily Percentage of Emergency Department of Acute Diarrhea Visits & 7-day Moving Average

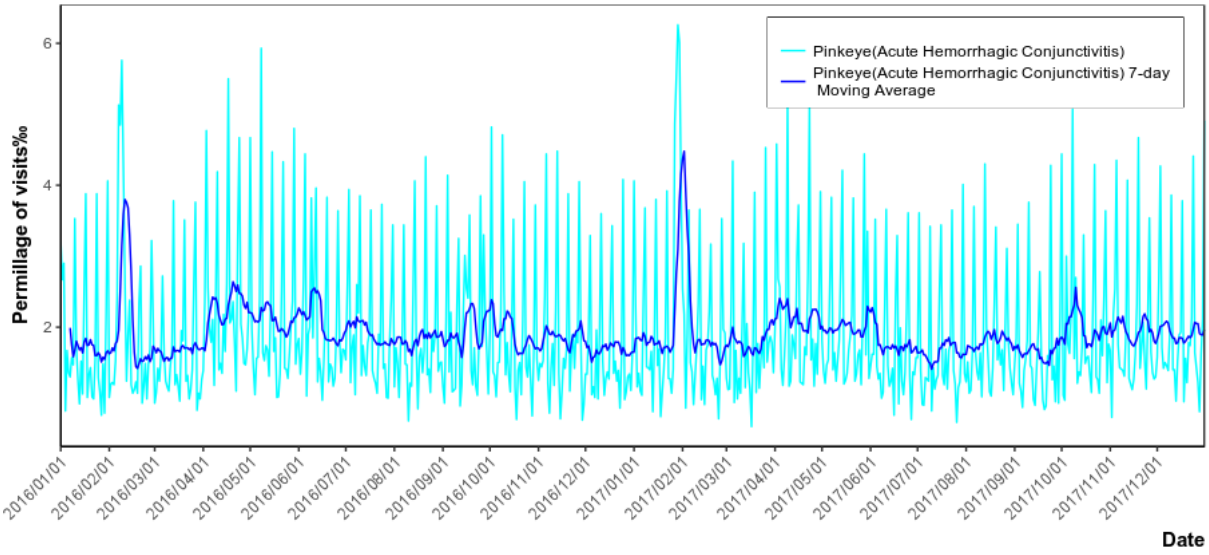

Fig 23 Daily Permillage of Emergency Department of Acute Hemorrhagic Conjunctivitis Visits & 7-day Moving Average

Disease Surveillance using National Health Insurance Data

I. Introduction

To strength 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 facilitate full assessment of epidemics and grasp the trends of prevalence.

III. Data analysis method

From the surveillance data received daily, Taiwan CDC extracts representative ICD-10-CM (International Classification of Diseases, Clinical Modification, Tenth Revision) coded diagnostic data, including secondary data on admission date, hospital districts, age groups, and codes of outpatient/inpatient/emergency department. 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 gentle prevalence curve.

IV. Findings

1. Influenza-like illness (ILI)

In 2017, between 308 and 22,297 person-times visited the hospitals for influenza-like illness on an outpatient basis every day, which was lower than the number of outpatient visits (ranging between 1,114 and 32,307 person-times a day) in 2016. 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 in end-June, then gradually slowed to reach stability. In December, it raised slowly again. The epidemic occurred later than 2016, mainly in June and July without significant epidemic in February and March in 2017.

2. Enterovirus infections

In 2017, between 48 and 3,888 person-times visited the hospitals for enterovirus infection on an outpatient basis every day, which was lower in comparison with the number of outpatient visits in 2016 (ranging between 38 and 6,005 person-times a day). By observing the trends in epidemic prevalence based on the 7-day moving average curve of outpatient visits due to enterovirus infection, it was found the epidemic condition picked up quickly in June, reach a spike during mid-September, and then dropped off suddenly in late October.

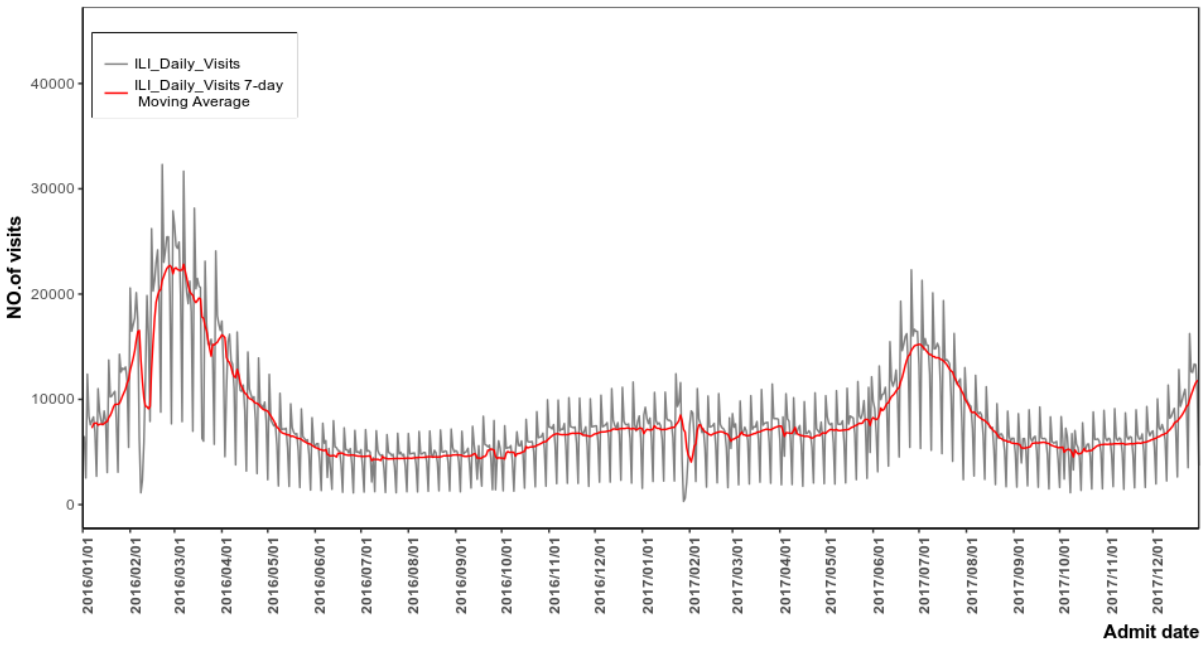

Figure 24 Daily influenza-like illness visits and the 7-day moving average trend, 2016-2017

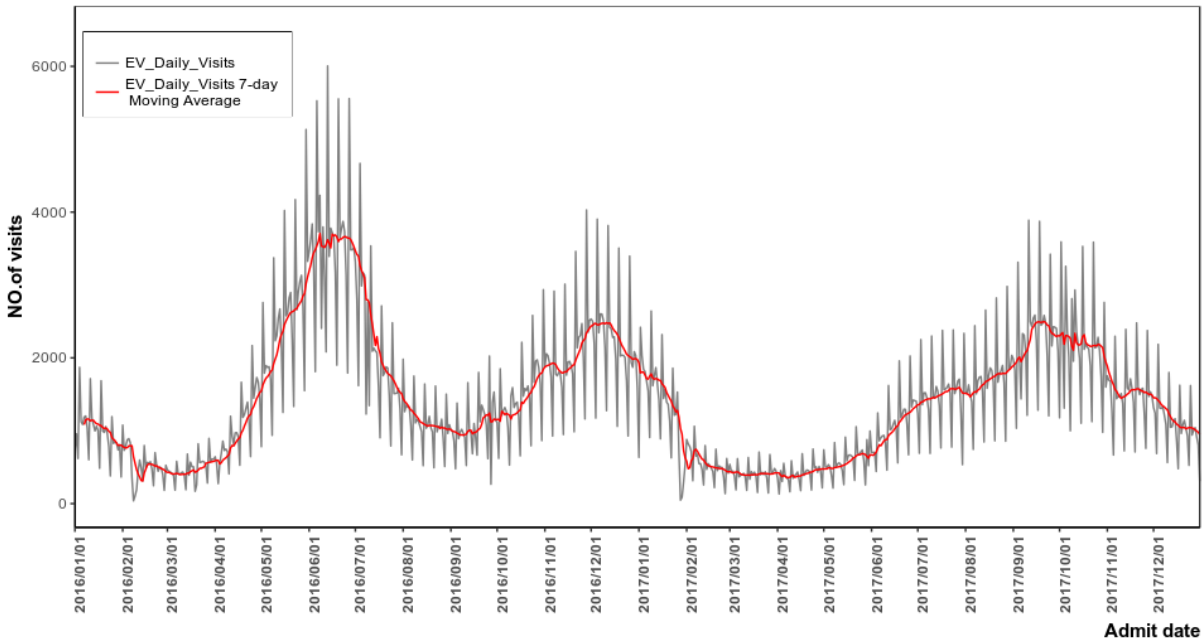

Figure 25 Daily enterovirus visits and the 7-day moving average trend, 2016-2017

Pneumonia and Influenza Mortality Surveillance

I. Introduction

Many parts of the world reported outbreaks of pandemic influenza A (H1N1) starting from April 2009. Soon after the World Health Organization (WHO) announced the case definition for H1N1 influenza on April 26, 2009, Taiwan CDC categorized H1N1 influenza as a Class 1 notifiable communicable disease on April 27 for the purpose of surveillance. WHO branded the flu outbreak as a "gentle pandemic" because the majority of H1N1 influenza cases had only mild symptoms. Thus, Taiwan reclassified H1N1 influenza from Class 1 to Class 4 notifiable communicable disease on June 19, 2009. Therefore, cases of influenza A (H1N1) infection with severe complications are handled under the Class 4 notifiable communicable disease regulation.

Taking influenza surveillance in the U.S. for example, they provide surveillance information in five categories, including viral surveillance, outpatient illness surveillance, mortality surveillance, hospitalization surveillance, and geographic spread of influenza. The mortality surveillance consists of two parts: 1. Pneumonia and Influenza (P&I) mortality surveillance is based on the National Center for Health Statistics (NCHS) Mortality Surveillance System; 2. Influenza-Associated Pediatric Mortality Surveillance is to monitor laboratory confirmed influenza-associated deaths in children (persons less than 18 years).

Based on the purpose of real-time surveillance and early warning for communicable diseases, Taiwan CDC embarks on inter-agency collaboration with the Department of Statistics, Ministry of Health and Welfare (MOHW). Taiwan CDC receives daily mortality data electronically from the Department of Statistics to analyze the number of deaths with underlying cause listed as pneumonia or influenza (P&I).

II. Purpose of surveillance

Pneumonia is a common complication of influenza infection. The great majority of influenza mortality is caused by secondary bacterial pneumonia or viral pneumonia. Thus, pneumonia should be included in influenza related mortality surveillance for analysis. The P&I mortality surveillance system was established in response to the H1N1 epidemic in 2009. In addition to the P&I mortality surveillance system, there are other systems including "Real-Time Outbreak and Disease Surveillance System (RODS)", "Disease surveillance using National Health Insurance data", "Contracted Laboratory Surveillance System", and "Notifiable Disease Surveillance System" in Taiwan CDC. These surveillance data all together provide information on influenza surveillance. It is expected that with routine operations, Taiwan CDC collects, compiles, and analyzes information on influenza epidemic to achieve the objectives and effects of real-time control and early warning.

III. Data analysis methods

Taiwan CDC conducts weekly surveillance of the trends in P&I mortality by searching 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 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 attributed to P&I ranged from 320 to 500 and from 320 to 660 in 2017 and 2016, respectively. The majority of P&I deaths occurred in 65 years old and above, accounting for 89.2% and 87.7% of P&I deaths in 2017 and 2016, respectively. In observation of the 4-week moving average curve of P&I deaths, it is found that the overall mortality of P&I deaths started to rise in the beginning of 2017, and peaked during weeks 4-11 and weeks 26-36. Overall, the death trend in 2017 was relatively mild without apparent peaks compared to the trend in 2016.

Figure 26 The surveillance trend of pneumonia and influenza mortality

PART III

Surveillance Reports of Selected Diseases

◎ **Abbreviations and Symbols Used in Table**

– No reported cases

… Not under surveillance

Measles

In 2017, 6 confirmed cases of measles (incidence rate: 0.03 per 100,000 population) were reported, which represented a decrease compared to 14 confirmed cases (incidence rate: 0.06 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 2 male cases (33.3%) and 4 female cases (66.7%) with male to female ratio of 0.5:1.0.

(2) By age group

There were 2 cases each in 25-39 and 40-64 years age groups, and 1 case each in 0-1 and 1-4 years age groups.

(3) By month

There were 2 cases each in March and April, 1 case each in February and December.

(4) By residential region

Taipei City and Taoyuan City each had 2 cases reported, followed by New Taipei City and Hsinchu City each with 1 case, while the other cities and counties had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Hsinchu City (0.23), followed by Taoyuan City (0.09) and Taipei City (0.07).

(5) Imported cases and countries of infection

There were 5 imported cases of measles in 2017, including 1 case each came from China, Indonesia, and Thailand. It was unknown where the rest of the 2 cases became infected.

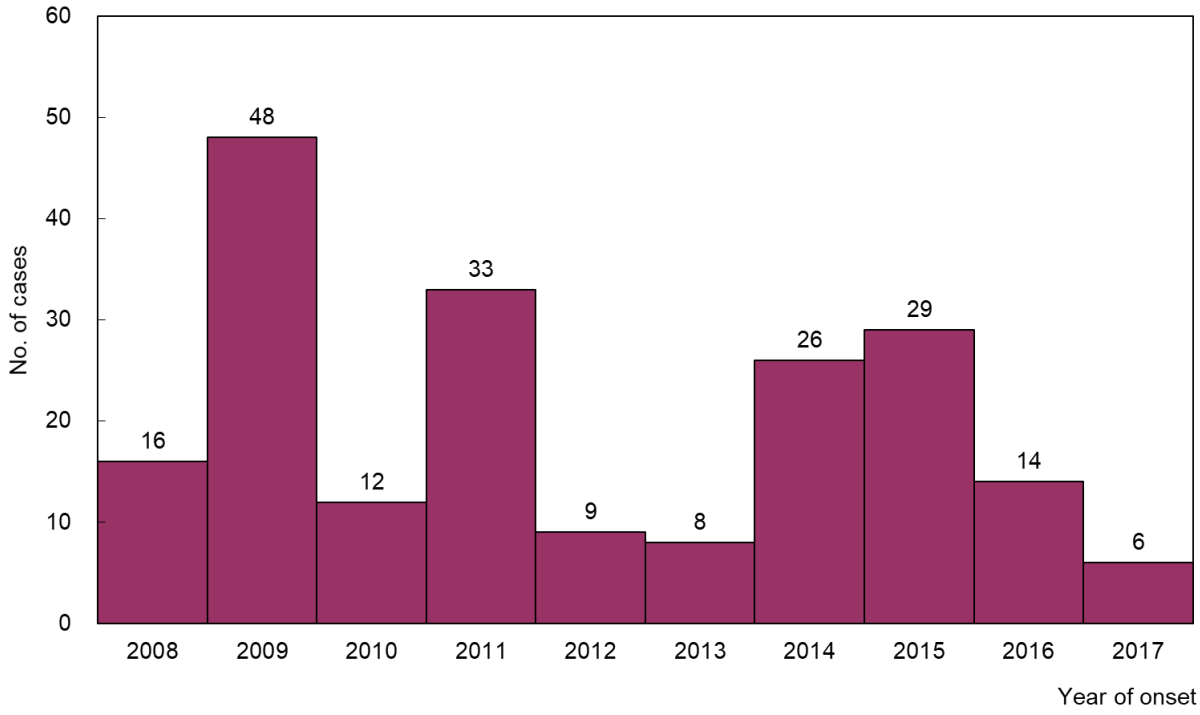

Figure 27 Number of confirmed measles cases, 2008-2017

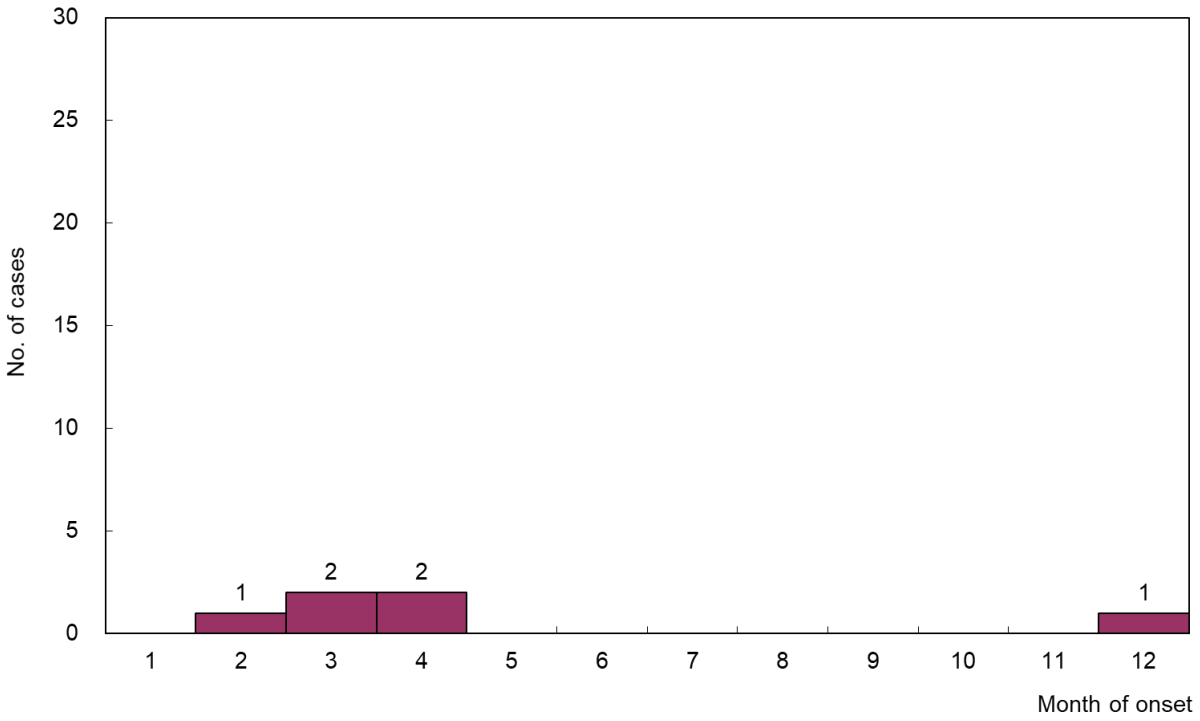

Figure 28 Number of confirmed measles cases, 2017

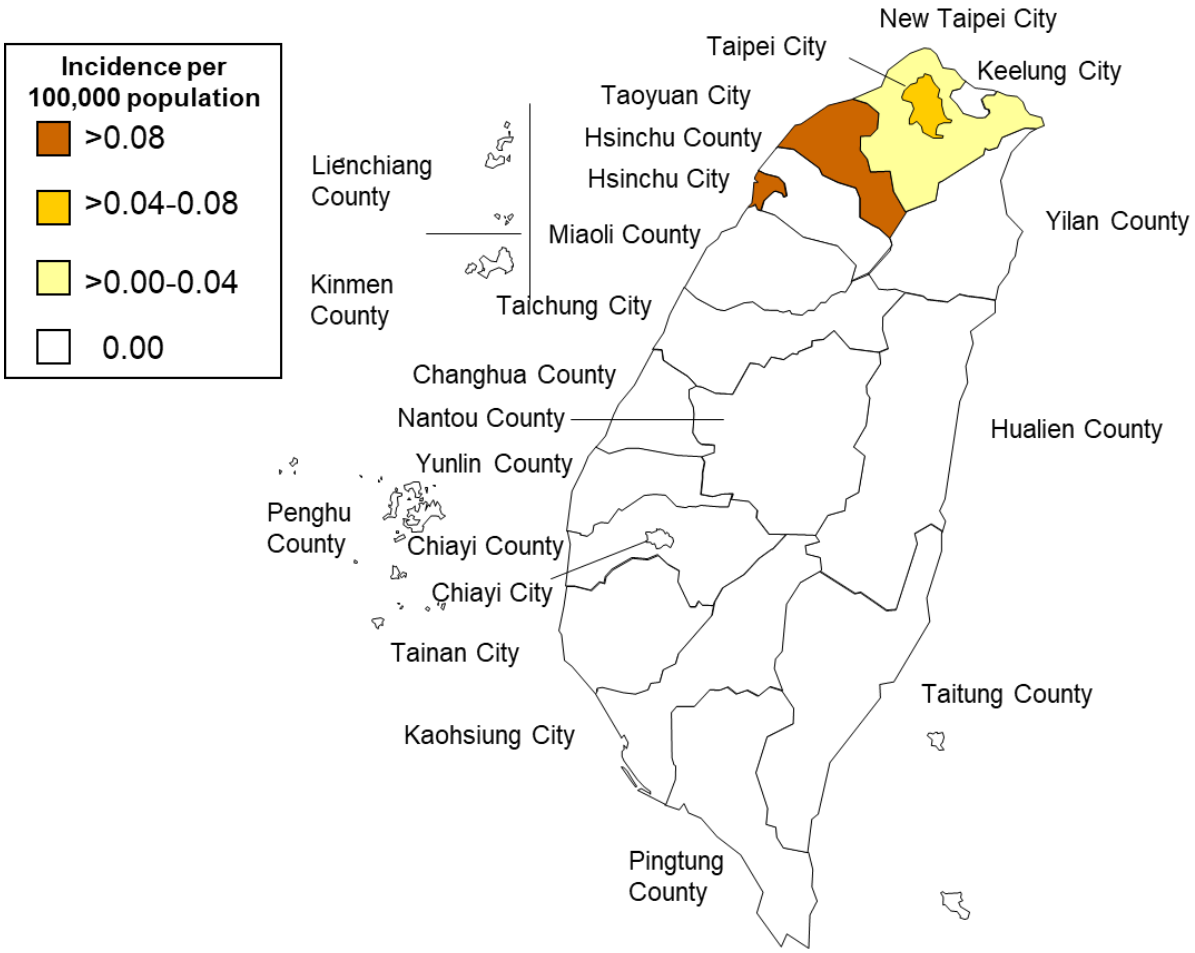

Figure 29 Geographical distribution by incidence of confirmed measles cases, 2017

Pertussis

In 2017, 34 confirmed cases of pertussis (incidence rate: 0.14 per 100,000 population) were reported, which represented an increase compared to 17 confirmed cases (incidence rate: 0.07 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 18 male cases (52.9%) and 16 female cases (47.1%) with male to female ratio of 1.1:1.0.

(2) By age group

There were 17 cases in 0-1 year age group, 5 cases in 15-24 year age group, 4 cases in 40-64 year age group, 3 case each in 5-14 and 25-39 age groups, and 1 case each in 1-4 and 65 years and over age groups.

Of the 17 cases in 0-1 year age group, 7 cases were 1 month old, 6 cases were 2 months old, 2 cases each were 3 and 4 months old.

(3) By month

There were 6 cases in September, 5 cases each in May and August, 4 cases each in March and April, 3 cases in July, 2 cases each in January, June, and October, and 1 case in February. There were no cases in November and December.

(4) By residential region

New Taipei City had the highest number of incidents with 14 cases reported, followed by Taipei City with 6 cases, Taoyuan City and Changhua County each with 5 cases, Hsinchu City, Hsinchu County, Miaoli County and Pingtung County each with 1 case. The other cities and counties had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Changhua County (0.39), followed by New Taipei City (0.35) and Taoyuan City and Hsinchu City (0.23 respectively).

(5) Imported cases and countries of infection

There were no imported cases of pertussis in 2017.

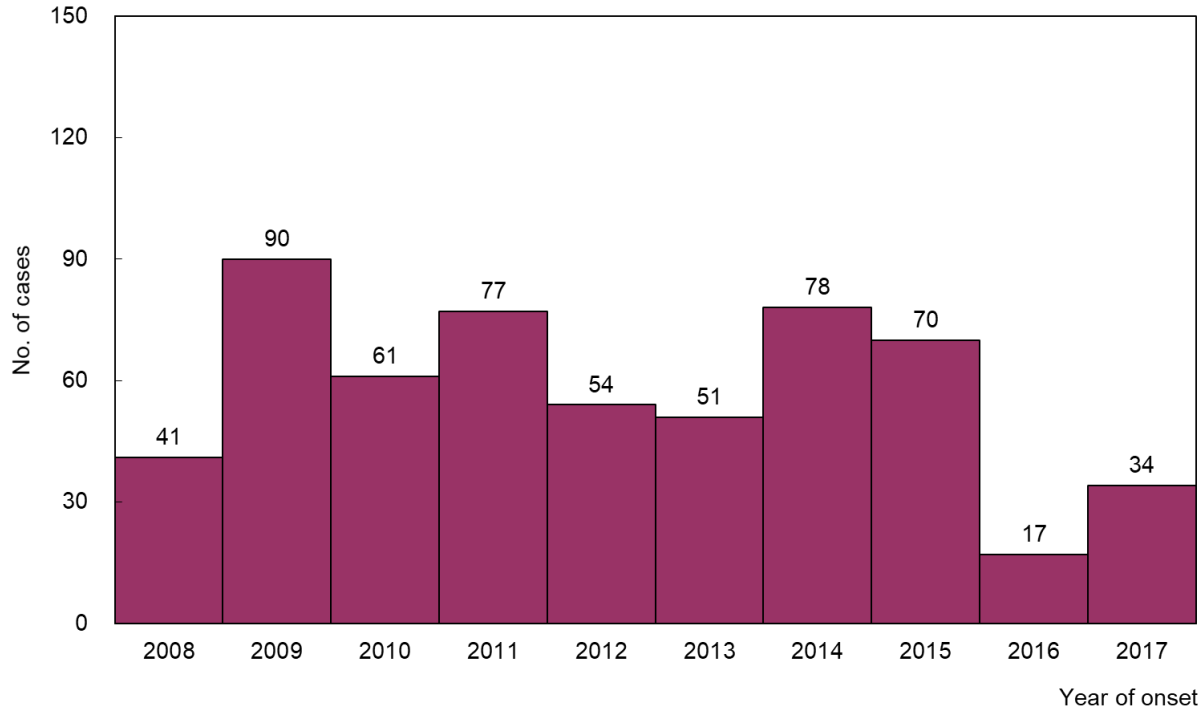

Figure 30 Number of confirmed pertussis cases, 2008-2017

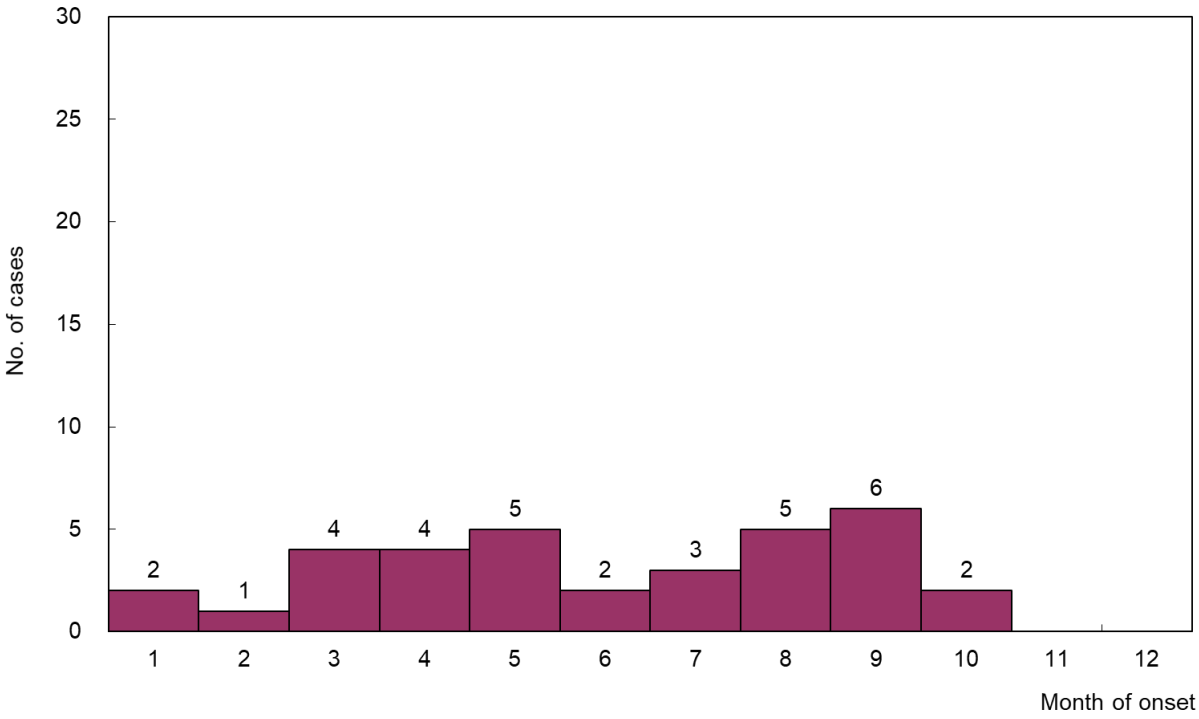

Figure 31 Number of confirmed pertussis cases, 2017

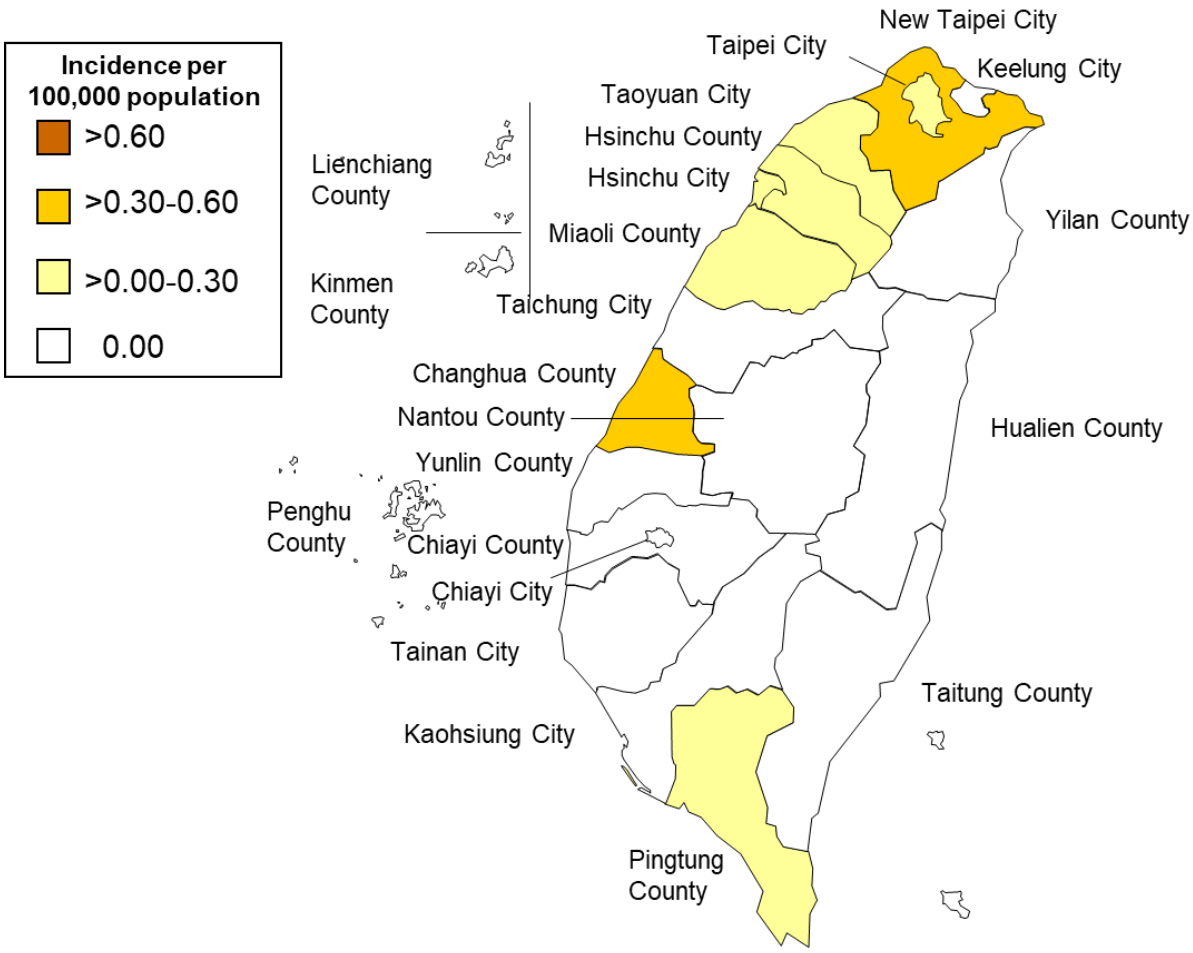

Figure 32 Geographical distribution by incidence of confirmed pertussis cases, 2017

Meningococcal Meningitis

In 2017, 12 confirmed cases of meningococcal meningitis (incidence rate: 0.05 per 100,000 population) were reported, which represented an increase compared to 8 confirmed cases (incidence rate: 0.03 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

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

(2) By age group

There were 5 cases in 15-24 years age group, 2 case each in 0-1, 1-4, and 65 years and over age groups, and 1 case in 40-64 years age group.

(3) By month

There were 4 cases in July, 3 cases in March, and 1 case each in January, February, May, August and December.

(4) By residential region

Confirmed cases were reported in 6 cities and counties, including New Taipei City and Hsinchu County each with 3 cases, Taipei City and Taitung County each with 2 cases, and Tainan City and Kaohsiung City each with 1 case. The other cities and counties had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Taitung County (0.91), followed by Hsinchu County (0.55) and New Taipei City (0.08).

(5) Imported cases and countries of infection

There were no imported cases of meningococcal meningitis in 2017.

(6) By serogroup

Following laboratory confirmation, 9 confirmed cases were identified as serogroup B meningococcal infection, 1 confirmed case was identified as serogroup Y, and 2 confirmed cases were unidentified serotype case.

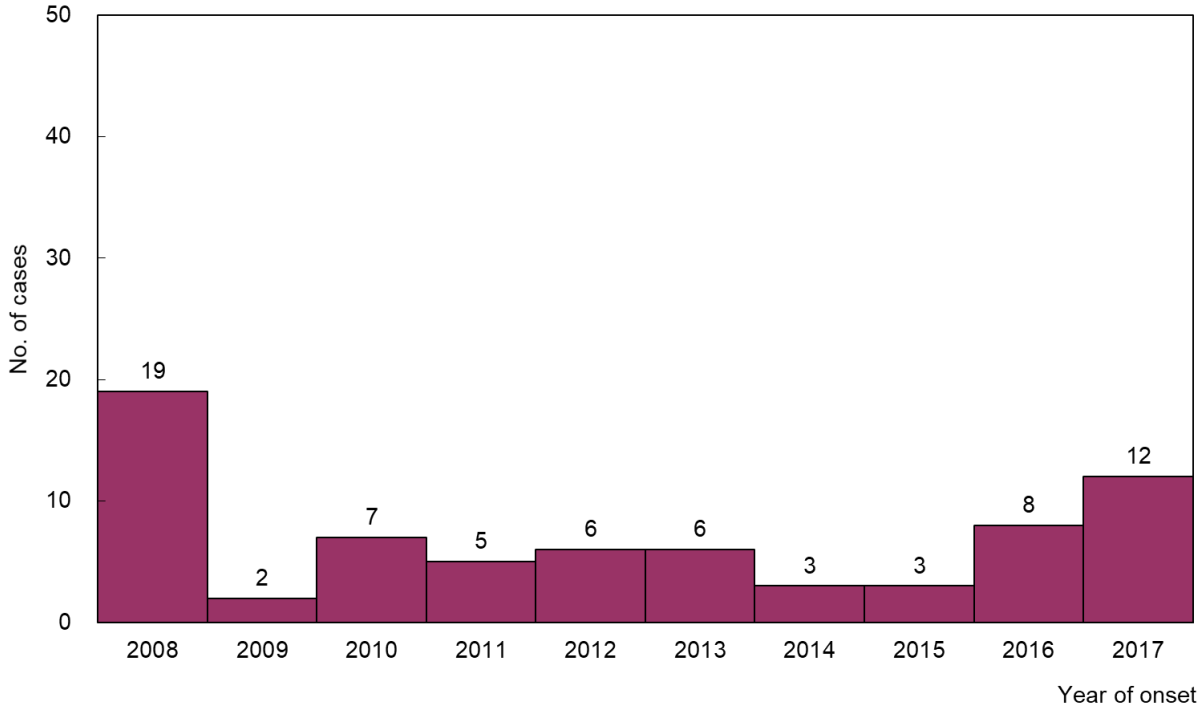

Figure 33 Number of confirmed meningococcal meningitis cases, 2008-2017

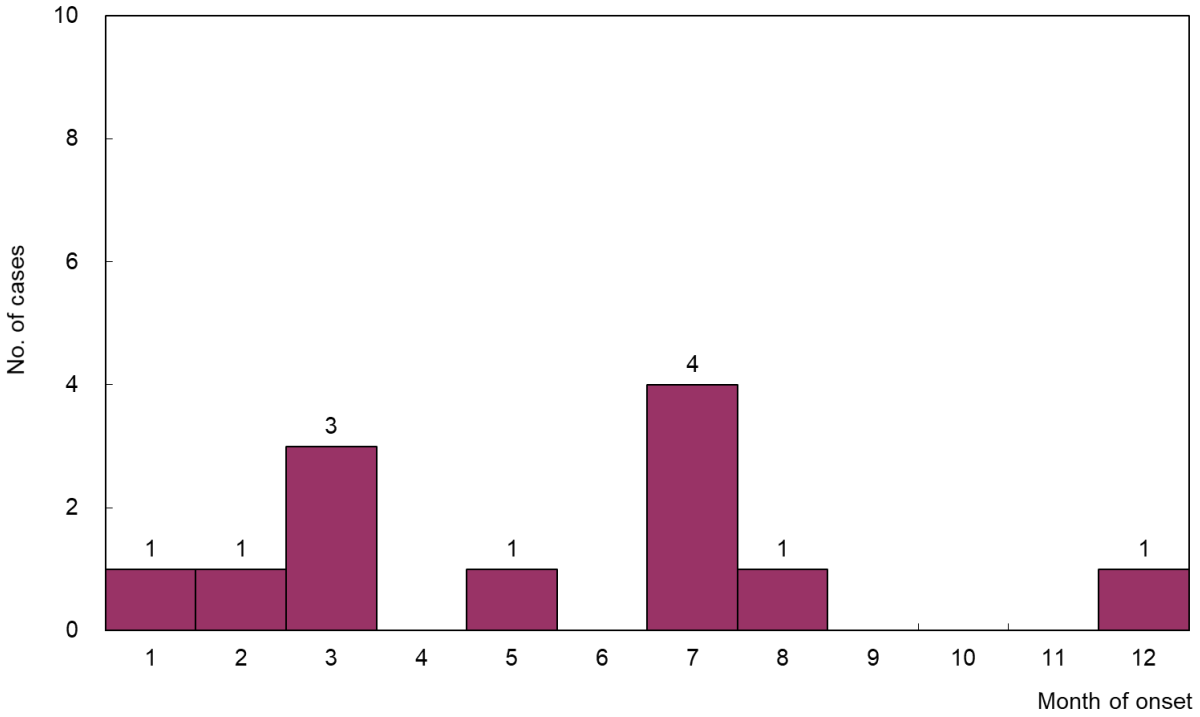

Figure 34 Number of confirmed meningococcal meningitis cases, 2017

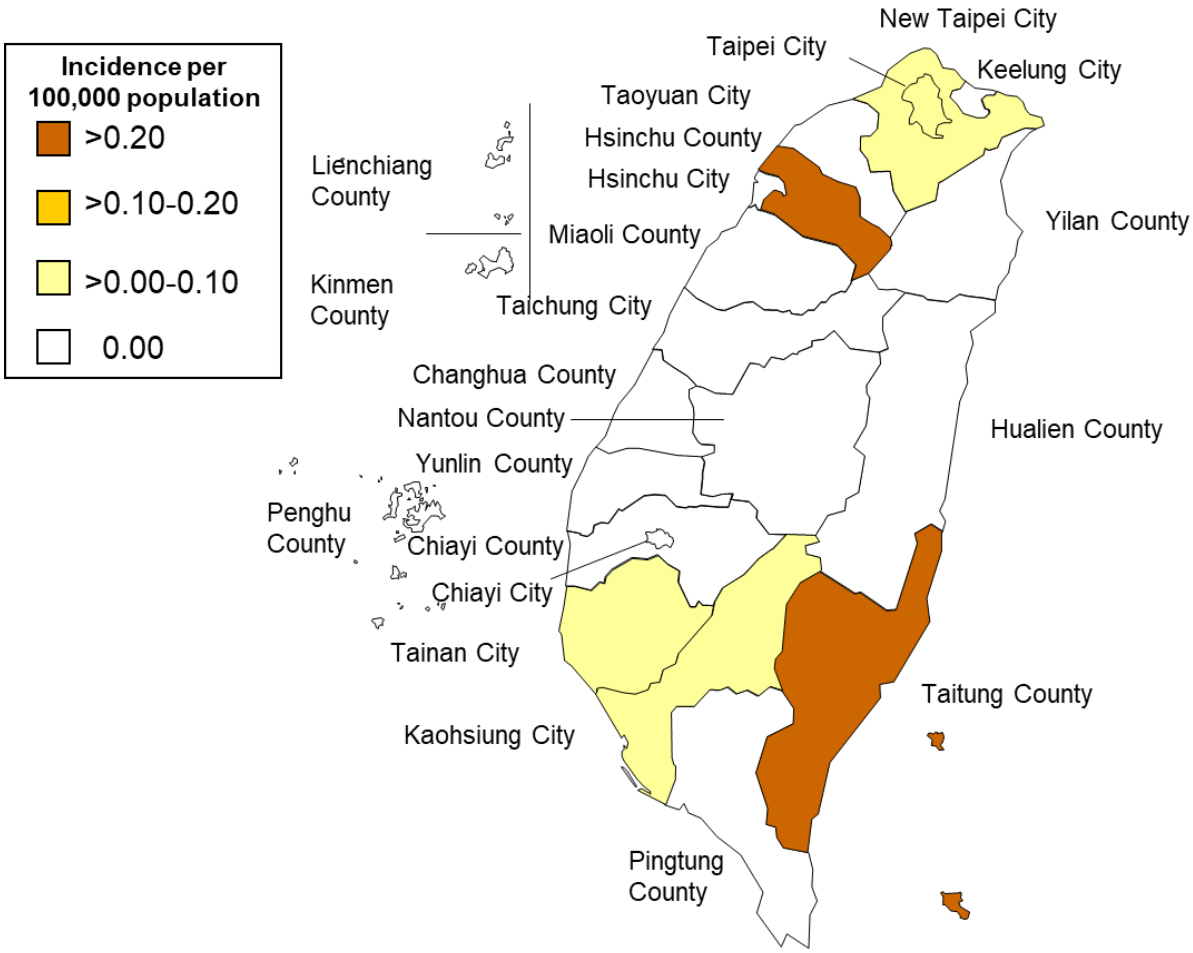

Figure 35 Geographical distribution by incidence of confirmed meningococcal meningitis cases, 2017

Japanese Encephalitis

In 2017, 25 confirmed cases of Japanese encephalitis (incidence rate: 0.11 per 100,000 population) were reported, which represented an increase compared to 23 confirmed cases (incidence rate: 0.10 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 15 male cases (60.0%) and 10 female cases (40.0%) with male to female ratio of 1.5:1.0.

(2) By age group

By age group, there were 16 cases in 40-64 years age group, 5 cases in 65 years and over age group, 3 cases in 25-39 years age group, and 1 case in 15-24 years age group.

(3) By month

The cases occurred mostly in warm seasons, with 10 cases in July, 9 cases in June, and 3 cases each in May and September.

(4) By residential region

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

The incidence rate of confirmed cases per 100,000 population was the highest in Taitung County (0.45), followed by Chiayi County (0.39) and Hualien County (0.30).

(5) Imported cases and countries of infection

There were no imported cases of Japanese encephalitis in 2017.

(6) By clinical symptoms

Among the confirmed cases, 21 cases had fever, 14 cases had disorder of consciousness, 8 cases had headache, 7 cases had stiff necks, 5 cases had psychological symptoms (delirium, unconsciousness, etc.), 3 cases each had muscle cramps or vomiting, 2 cases had dystonia, and 1 case had encephalitic stimulation symptom.

(7) Residential condition or neighboring environment

Among the confirmed cases, 13 cases lived nearby pigpens, 10 cases lived nearby pigeonries, 8 cases lived nearby paddy fields, 5 cases lived nearby duck or chicken farms, 1 case lived nearby ponds, and 1 case lived nearby the goat farm.

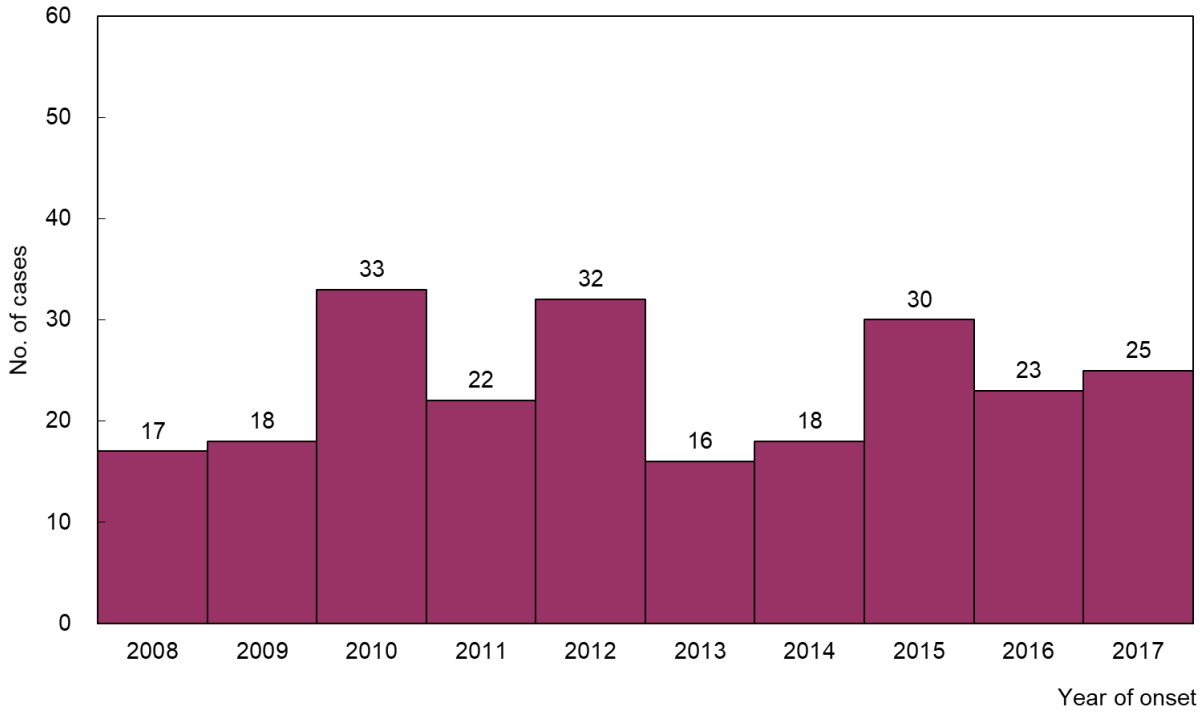

Figure 36 Number of confirmed Japanese encephalitis cases, 2008-2017

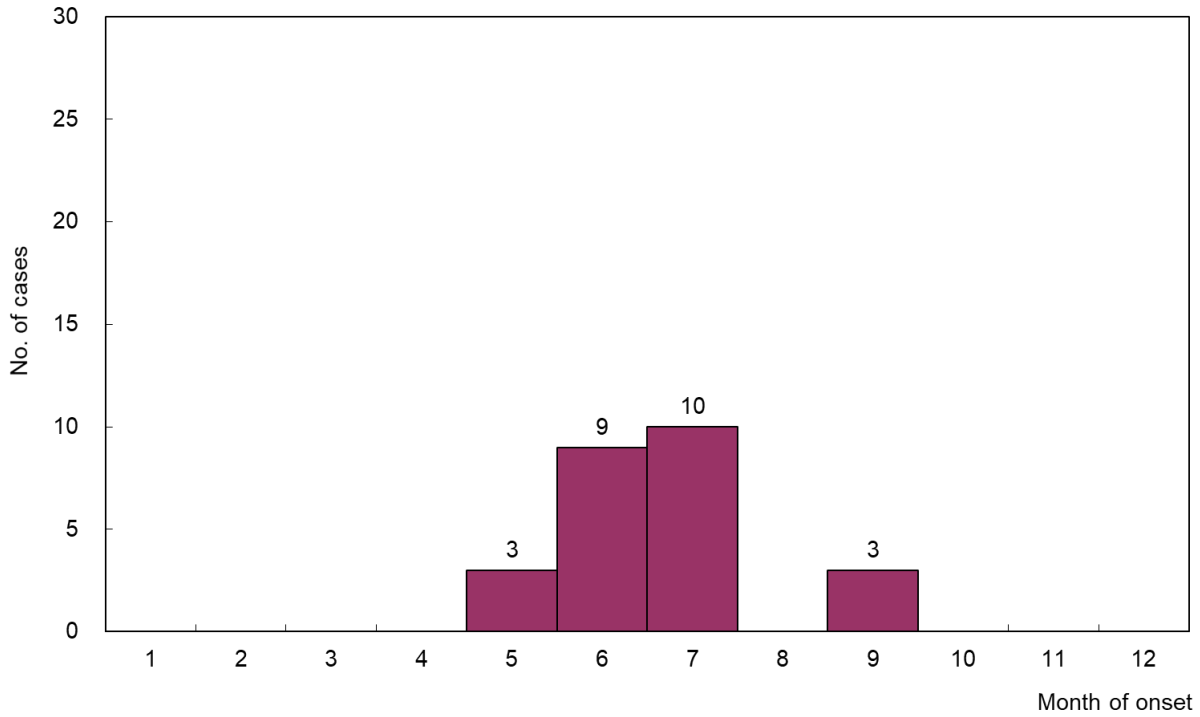

Figure 37 Number of confirmed Japanese encephalitis cases, 2017

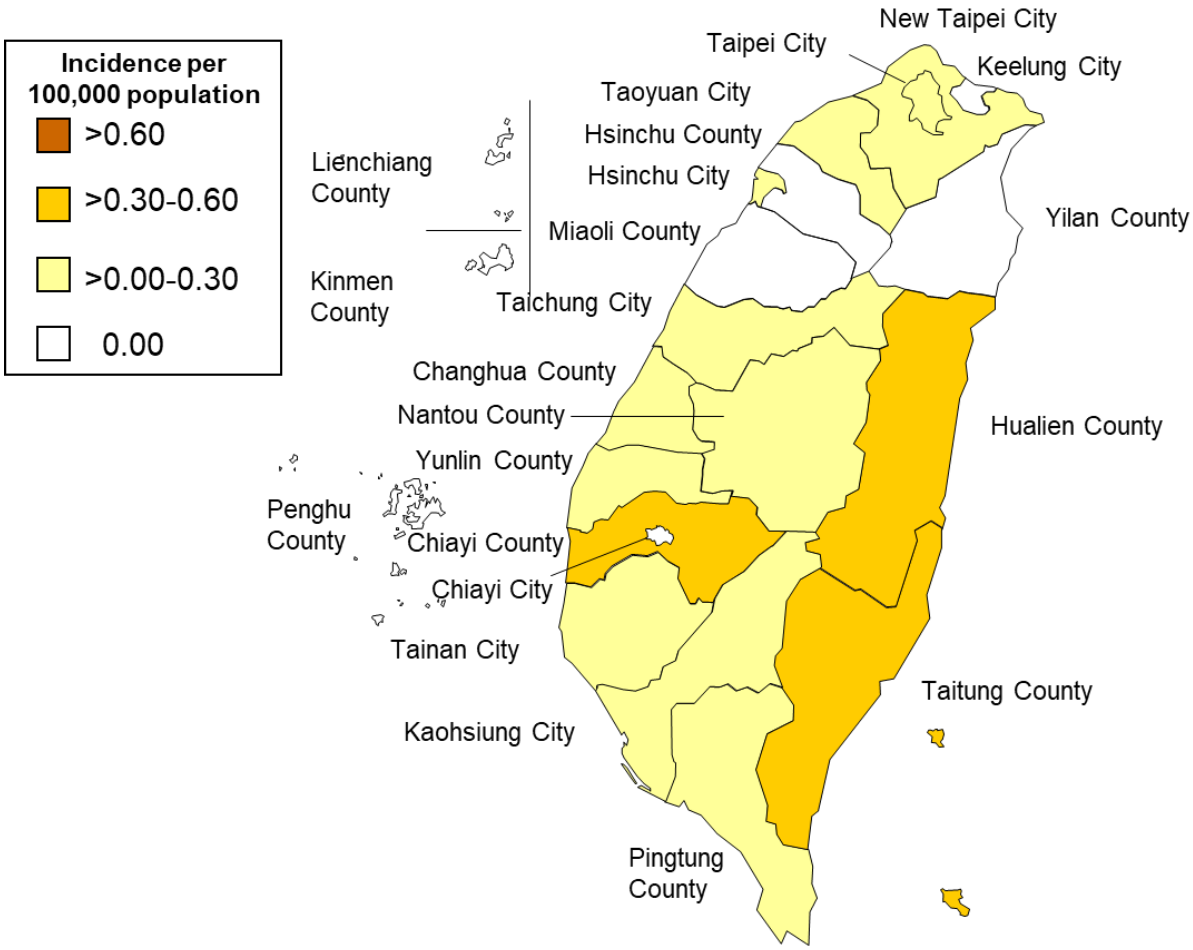

Figure 38 Geographical distribution by incidence of confirmed Japanese encephalitis cases, 2017

Acute Hepatitis A

In 2017, 369 confirmed cases of acute hepatitis A (incidence rate: 1.57 per 100,000 population) were reported, which represented a decrease compared to 1,133 confirmed cases (incidence rate: 4.82 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 301 male cases (81.6%) and 68 female cases (18.4%) with male to female ratio of 4.4:1.0.

(2) By age group

There were 197 cases in 25-39 years age group, 75 cases in 15-24 years age group, 74 cases in 40-64 years age group, 15 cases in 65 years and over age group, 6 cases in 5-14 years age group, and 2 cases in 1-4 years age group.

(3) By month

Acute hepatitis A cases were reported in each month of the year. The highest number of cases (65) were reported in January, followed by 62 cases in February, 54 cases in March, 37 cases in April, 35 cases in May, 28 cases in June, 22 cases in November, 18 cases in August, 16 cases in July, 12 cases in September, 11 cases in December and, 9 cases in October.

(4) By residential region

Except Kinmen County, Lienchiang County and Penghu County, all cities and counties had confirmed cases in 2017. New Taipei City had the highest number of incidents with 81 cases reported, followed by Kaohsiung City with 63 cases, Taipei City with 53 cases, Taichung City with 47 cases, Taoyuan City with 36 cases, Tainan City with 22 cases, and Pingtung County with 14 cases. The other cities and counties all had less than 10 cases reported.

The incidence rate of confirmed cases per 100,000 population was the highest in Kaohsiung City (2.27), followed by New Taipei City (2.03) and Taipei City (1.97).

(5) Imported cases and countries of infection

There were 50 imported cases of acute hepatitis A in 2017, including 7 cases from Malaysia, 6 cases from Thailand, 5 cases each from Philippines and Cambodia, 4 cases each from China, Japan, and Vietnam, 2 cases each from Indonesia, India, Myanmar, and Lesotho, and 1 case each from South Korea, Hong Kong, Sri Lanka, Marshall Islands, Kuwait, the United States and Egypt.

(6) By clinical symptoms

An epidemiological survey of 369 confirmed cases showed that in cases with symptoms (multiple answers are allowed), 60.7% (224 person-times) had jaundice, 49.3% (182 person-times) had abdominal pain, 49.1% (181 person-times) had stomach discomfort, 47.4% (175 person-times) had tiredness, 44.2% (163 person-times) had nausea, 41.7% (154 person-times) had poor appetite, 40.4% (149 person-times) had fever, 39.8% (147 person-times) had tawny urine, and 33.6% (124 person-times) had vomiting.

(7) Source of drinking water and dietary habits

The epidemiological investigation of 369 confirmed cases showed that the major sources of residential drinking water (multiple answers are allowed) were tap water in 52.0% of cases (192 person-times), filtered water in 40.7% of cases (150 person-times), packaged water in 28.7% of cases (106 person-times), and spring water in 1.2% of cases (7 person-times). As for dietary habits (multiple answers allowed), eating at street vendors or having boxed meals were identified in the largest percentage of cases, accounting for 46.1% (170 person-times), followed by eating in home in 29.3% of cases (108 person-times).

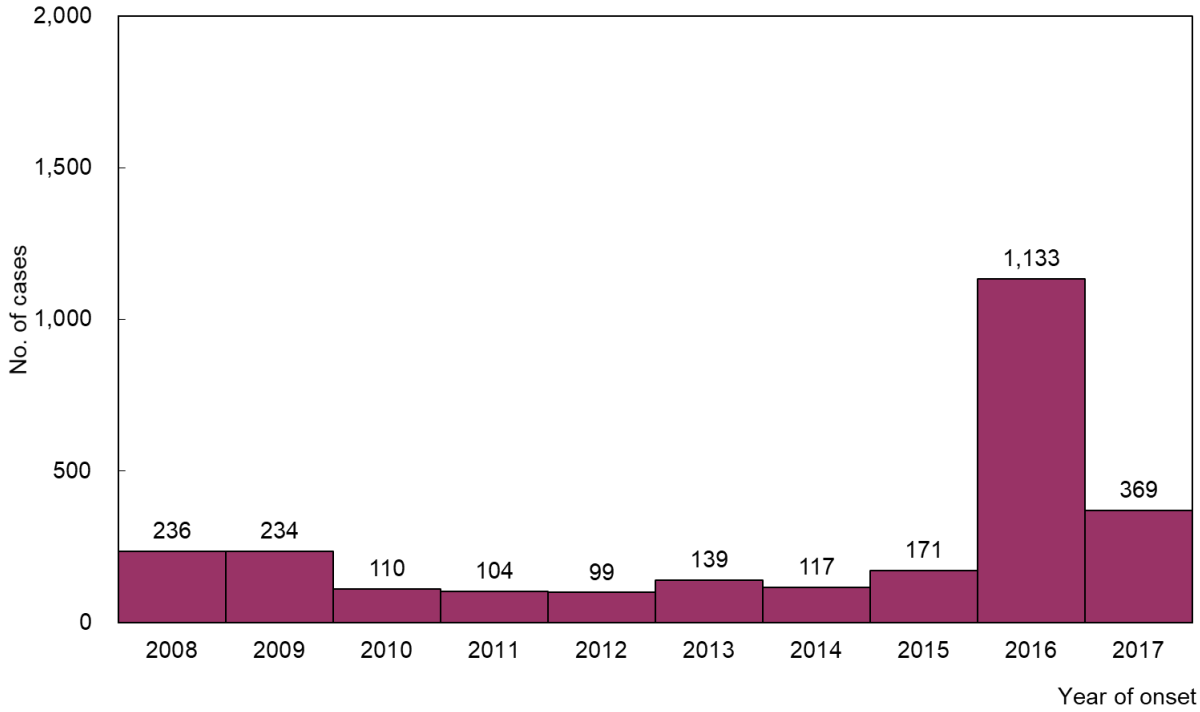

Figure 39 Number of confirmed acute hepatitis A cases, 2008-2017

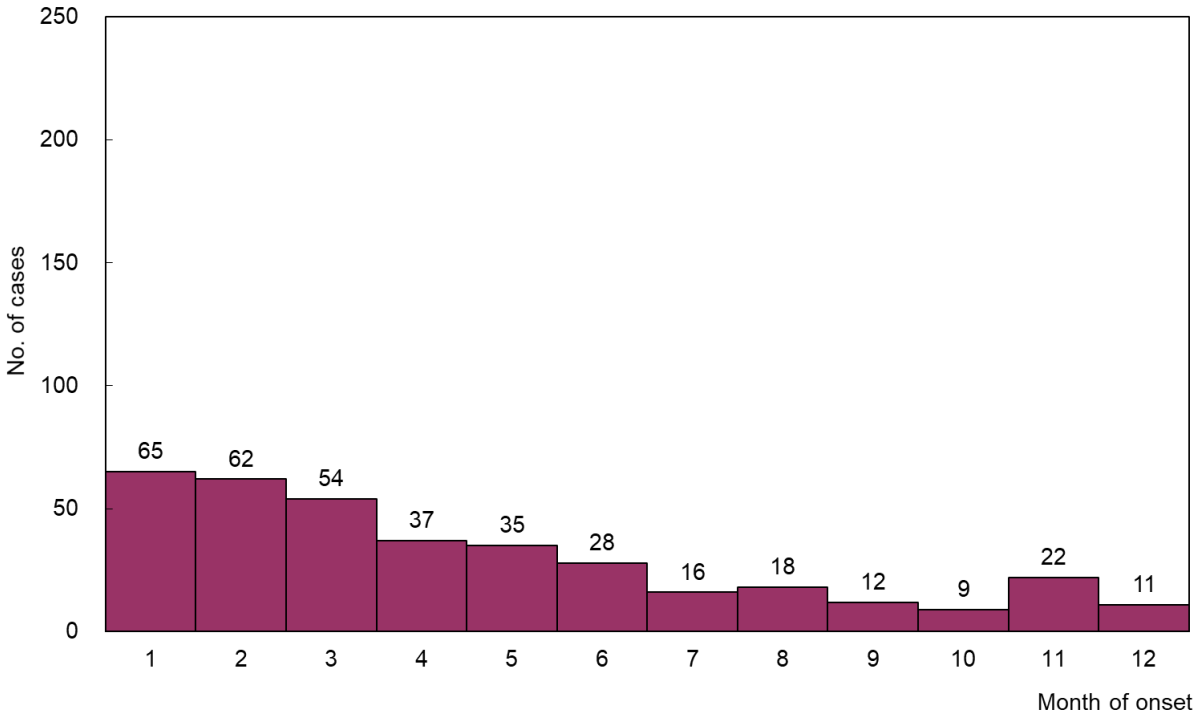

Figure 40 Number of confirmed acute hepatitis A cases, 2017

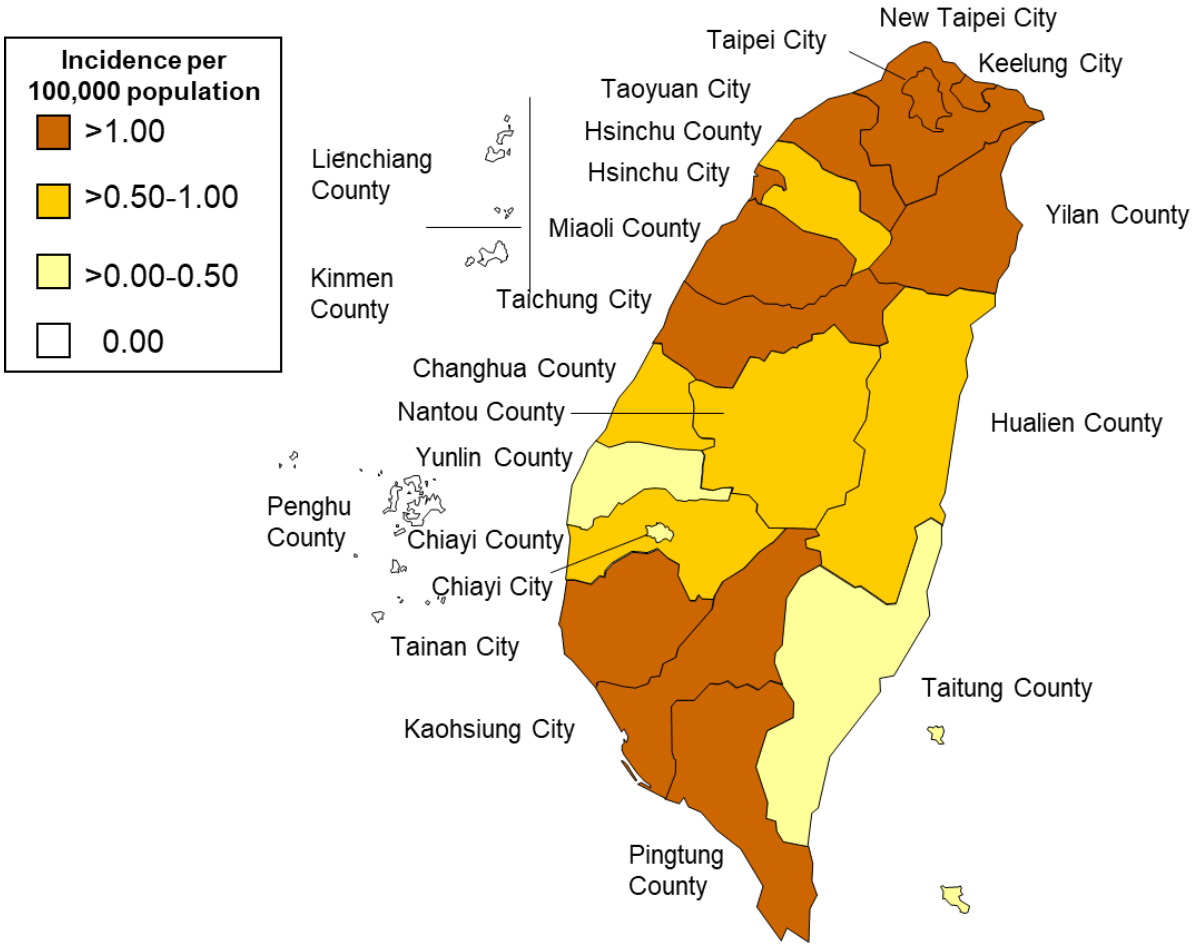

Figure 41 Geographical distribution by incidence of confirmed acute hepatitis A cases, 2017

Acute Hepatitis B

In 2017, 151 confirmed cases of acute hepatitis B (incidence rate: 0.64 per 100,000 population) were reported, which represented an increase compared to 118 confirmed cases (incidence rate: 0.50 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 92 male cases (60.9%) and 59 female cases (39.1%) with male to female ratio of 1.6:1.0.

(2) By age group

There were 69 cases in 40-64 years age group, 56 cases in 25-39 years age group, 18 cases in 15-24 years age group, and 8 cases in 65 years and over age group.

(3) By month

Confirmed cases were reported in each month of the year without apparent concentration in any of the months. Except for July with 22 cases, June with 16 cases, January and March each with 15 cases, October with 13 cases, August and December each with 12 cases, February and November each with 11 cases, and May with 10 cases, April and September with less than 10 cases.

(4) By residential region

New Taipei City had the highest number of incidents with 36 confirmed cases reported, followed by Taoyuan City and Kaohsiung City each with 22 cases, Taichung City with 18 cases, Tainan City with 13 cases, Taipei City with 12 cases, Pingtung County with 7 cases, Yilan County with 6 cases, Hsinchu County with 5 cases, Changhua County with 4 cases, Hualien County with 2 cases, and Keelung City, Hsinchu City, Miaoli County, and Penghu County each with 1 case. The other cities and counties had no confirmed case.

The incidence rate of confirmed cases per 100,000 population was the highest in Yilan County (1.31), followed by Taoyuan City (1.01) and Penghu County (0.96).

(5) Imported cases and countries of infection

There were 8 imported cases of acute hepatitis B in 2017, including 4 cases from Vietnam, 2 cases from China, and 1 each case from Thailand and Philippines .

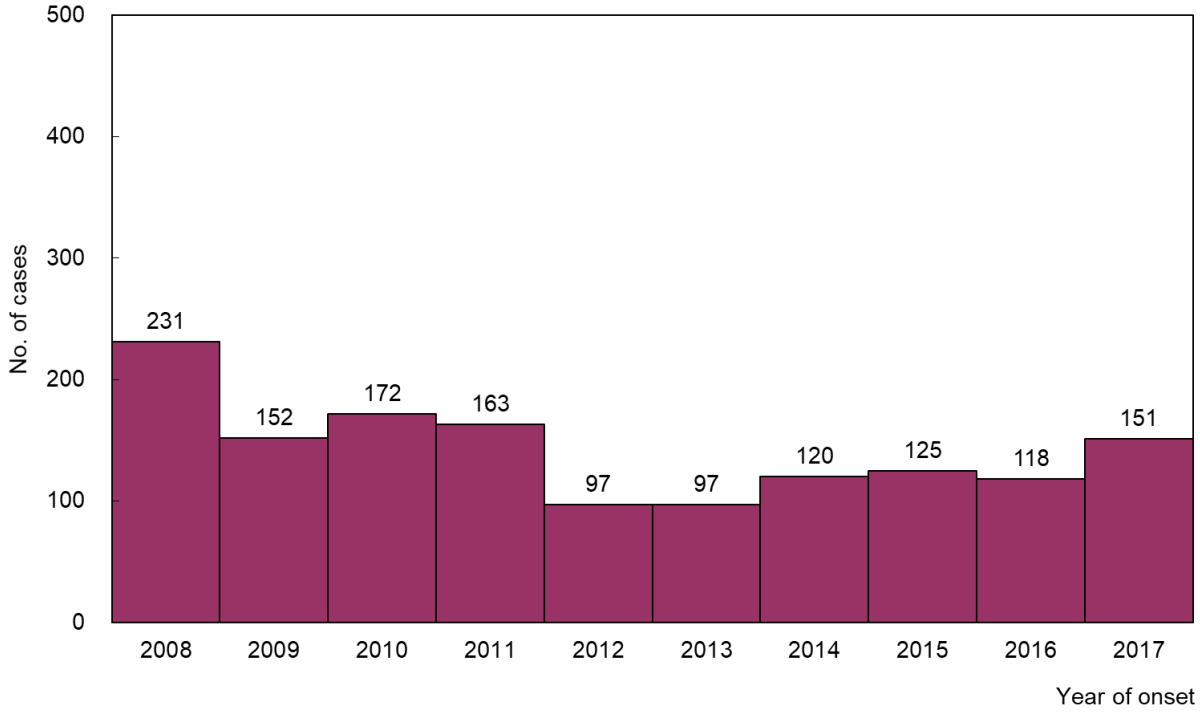

Figure 42 Number of confirmed acute hepatitis B cases, 2008-2017

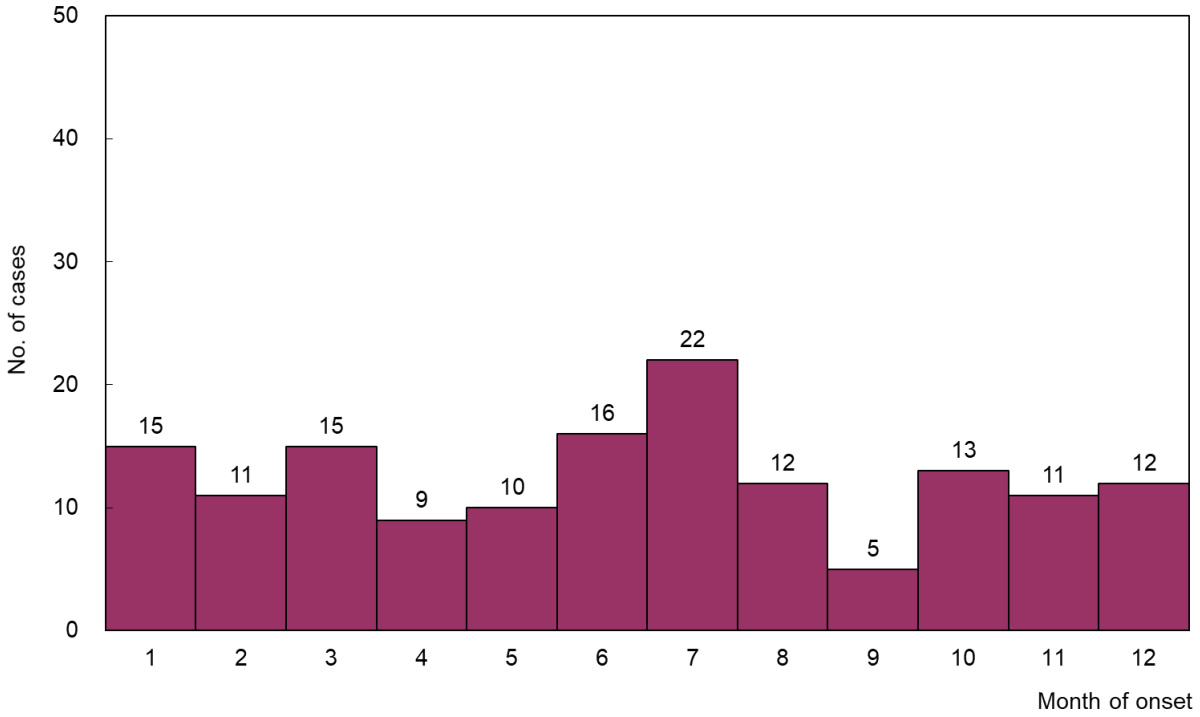

Figure 43 Number of confirmed acute hepatitis B cases, 2017

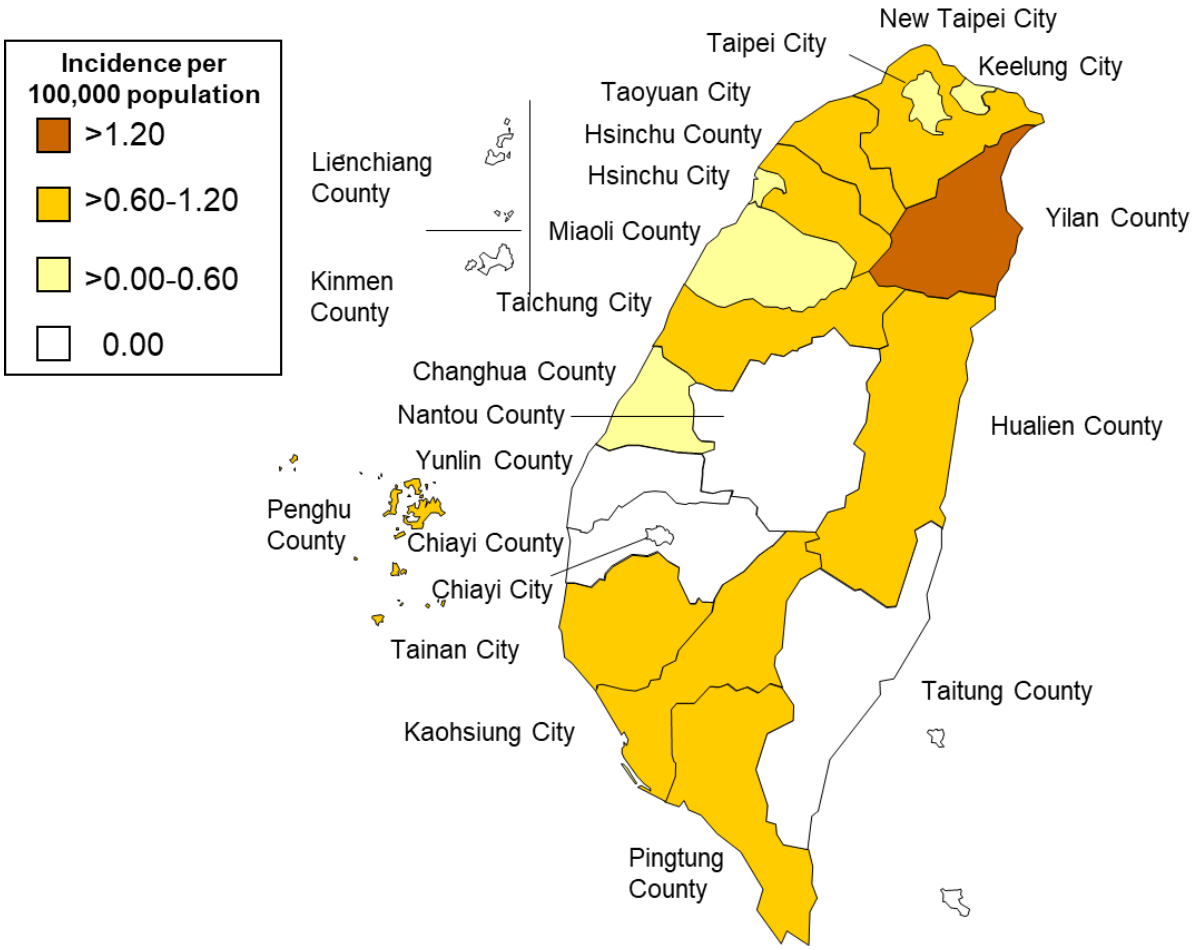

Figure 44 Geographical distribution by incidence of confirmed acute hepatitis B cases, 2017

Acute Hepatitis C

In 2017, 325 confirmed cases of acute hepatitis C (incidence rate: 1.38 per 100,000 population) were reported, which represented an increase compared to 207 confirmed cases (incidence rate: 0.88 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 216 male cases (66.5%) and 109 female cases (33.5%) with male to female ratio of 2.0:1.0.

(2) By age group

There were 136 cases in 40-64 years age group, 91 cases in 25-39 years age group, 84 cases in 65 years and over age group, and 14 cases in 15-24 years age group.

(3) By month

Acute hepatitis C cases were reported in each month of the year. December had the highest number of incidents with 42 confirmed cases reported, followed by 37 cases each in June and July, 33 cases in October, 26 cases each in March and November, 25 cases in August, 24 cases in May, 22 cases in February, 20 cases each in April and September, and 13 cases in January.

(4) By residential region

New Taipei City had the highest number of incidents with 61 cases reported, followed by Taipei City with 43 cases, Kaohsiung City with 37 cases, Taoyuan City with 35 cases, Taichung City with 29 cases, Tainan City with 18 cases, Yilan County with 15 cases, Hsinchu County with 13 cases, Chiayi County, Pingtung County, and Hualien County each with 10 cases, Keelung City, Changhua County, and Yunlin County each with 7 cases, and Chiayi City with 6 cases. The other cities and counties had less than 5 cases reported, whereas Lienchiang County and Penghu County had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Yilan County (3.28), followed by Hualien County (3.03) and Hsinchu County (2.36).

(5) Imported cases and countries of infection

There were 3 imported cases of acute hepatitis C in 2017, including 1 case each from China, Indonesia and Vietnam .

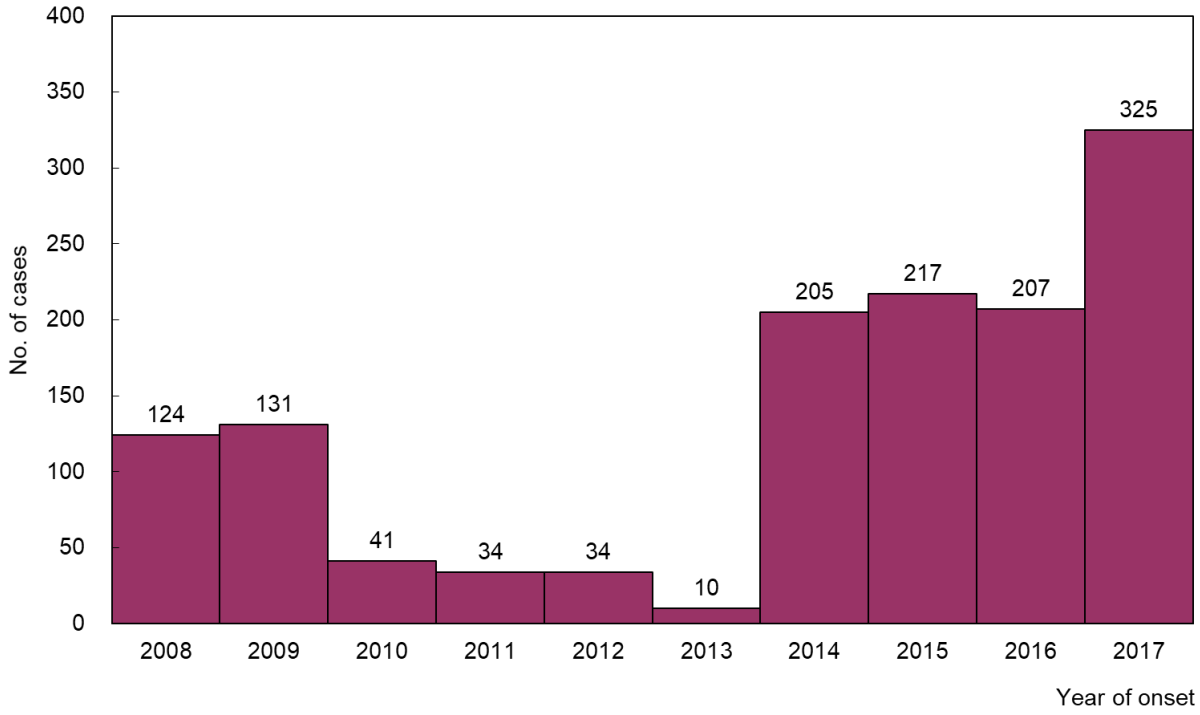

Figure 45 Number of confirmed acute hepatitis C cases, 2008-2017

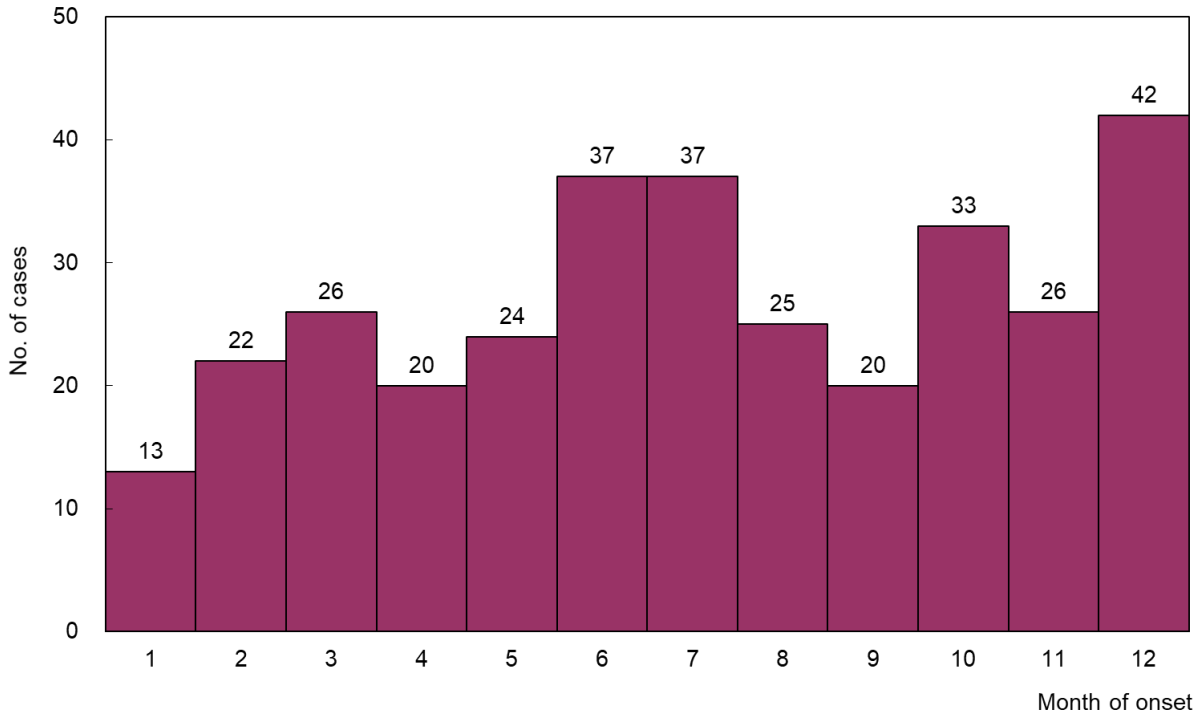

Figure 46 Number of confirmed acute hepatitis C cases, 2017

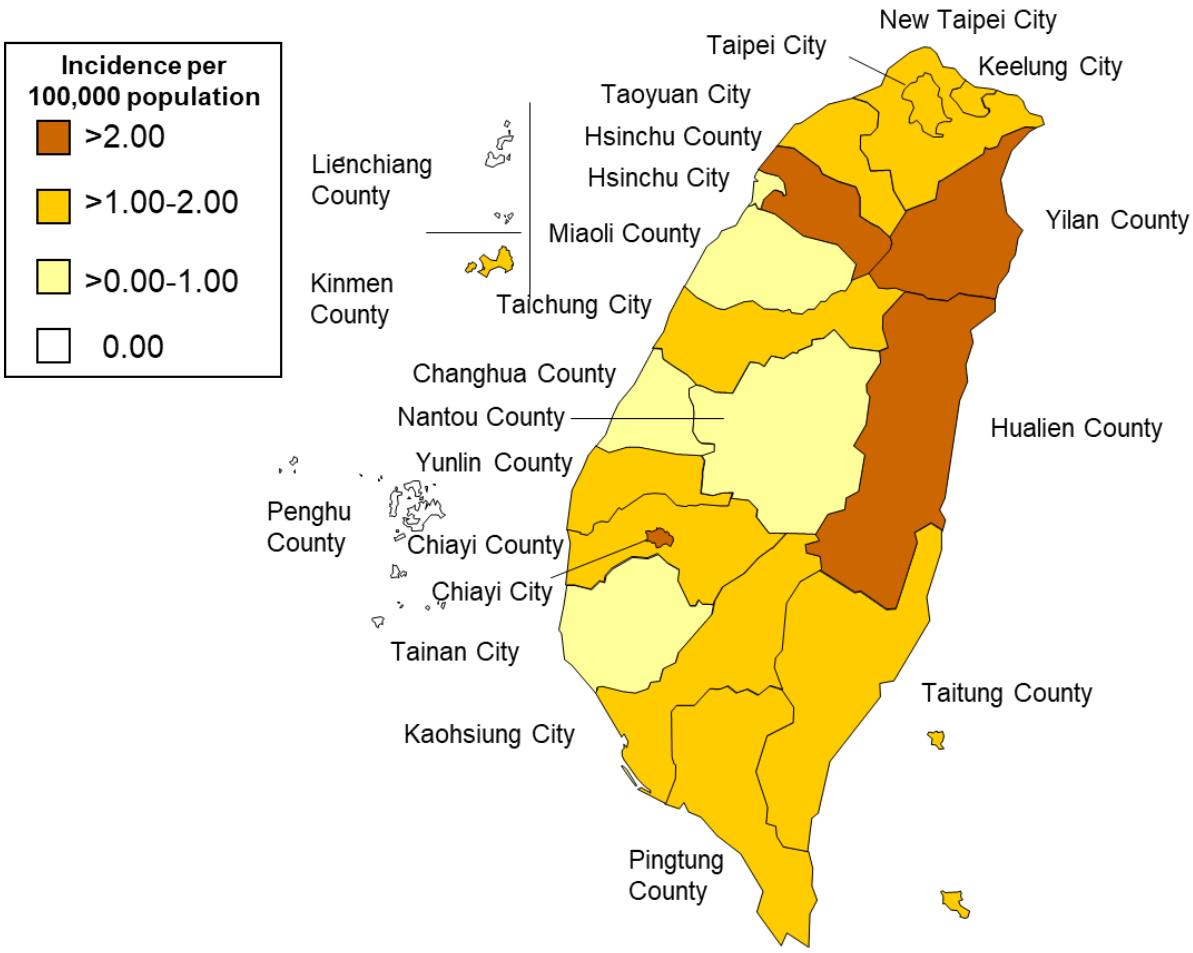

Figure 47 Geographical distribution by incidence of confirmed acute hepatitis C cases, 2017

Scrub Typhus

In 2017, 422 confirmed cases of scrub typhus (incidence rate: 1.79 per 100,000 population) were reported, which represented a decrease compared to 488 confirmed cases (incidence rate: 2.08 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 252 male cases (59.7%) and 170 female cases (40.3%) with male to female ratio of 1.5:1.0.

(2) By age group

The cases occurred predominantly in adults aged 25 years and above. In all, there were 229 cases in 40-64 years age group, 83 cases in 65 years and over age group, 64 cases in 25-39 years age group, 26 cases in 15-24 years age group, 14 cases in 5-14 years age group, and 6 cases in 1-4 years age group.

(3) By month

Confirmed cases were reported in each month of the year that concentrated mainly in June and July, while March had the fewest number of incidents. The distribution of cases in each month of the year is as follows: 37 cases in January, 30 cases in February, 10 cases in March, 16 cases in April, 37 cases in May, 65 cases in June, 67 cases in July, 38 cases each in August and September, 34 cases in October, 30 cases in November, and 20 cases in December.

(4) By residential region

Hualien County had the highest number of incidents with 71 confirmed cases reported, followed by Taitung County with 66 cases, Penghu County with 56 cases, Kaohsiung City with 55 cases, Kinmen County with 29 cases, Pingtung County with 21 cases, Nantou County with 16 cases, New Taipei City with 15 cases, Yilan County and Taoyuan City each with 14 cases, Tainan City with 11 cases, and Taichung City with 10 cases. The other cities and counties all had less than 10 cases reported, whereas there were no cases in Chiayi City.

The incidence rate of confirmed cases per 100,000 population was the highest in Lienchiang County (62.81), followed by Penghu County (54.02), Taitung County (29.98), Hualien County (21.51) and Kinmen County (21.28), and whereas the other cities and counties all had an incidence rate below 10.00.

(5) Imported cases and countries of infection

There were no imported cases of scrub typhus in 2017.

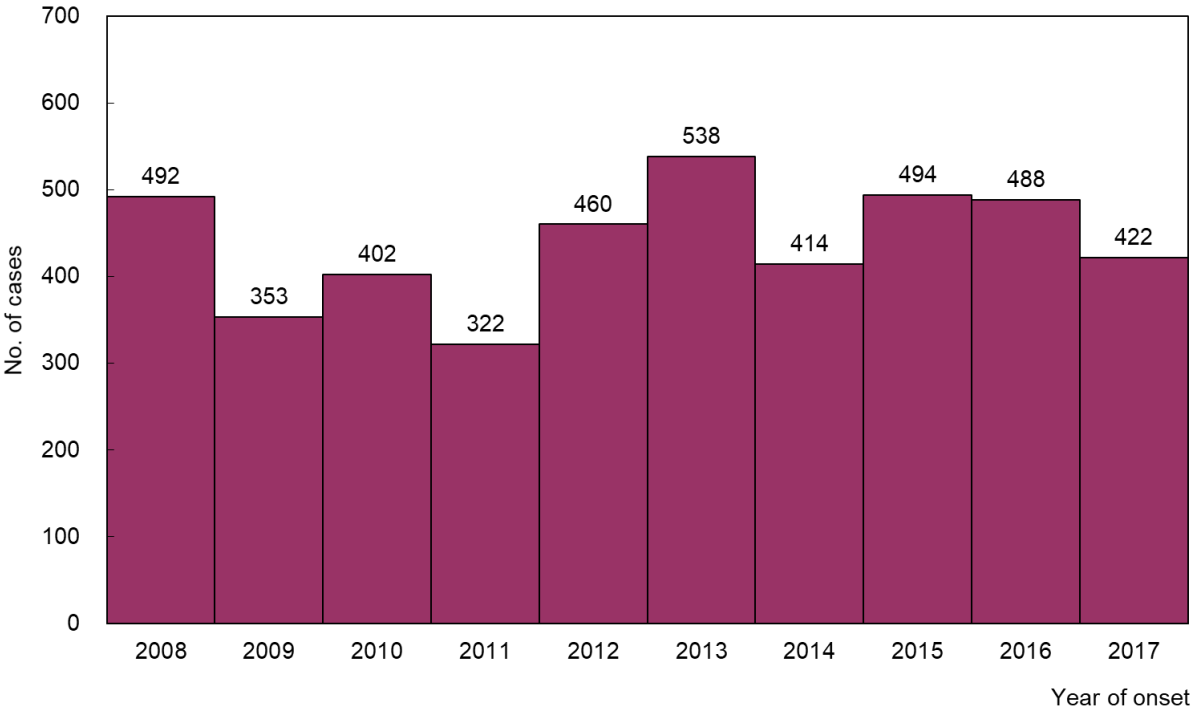

Figure 48 Number of confirmed scrub typhus cases, 2008-2017

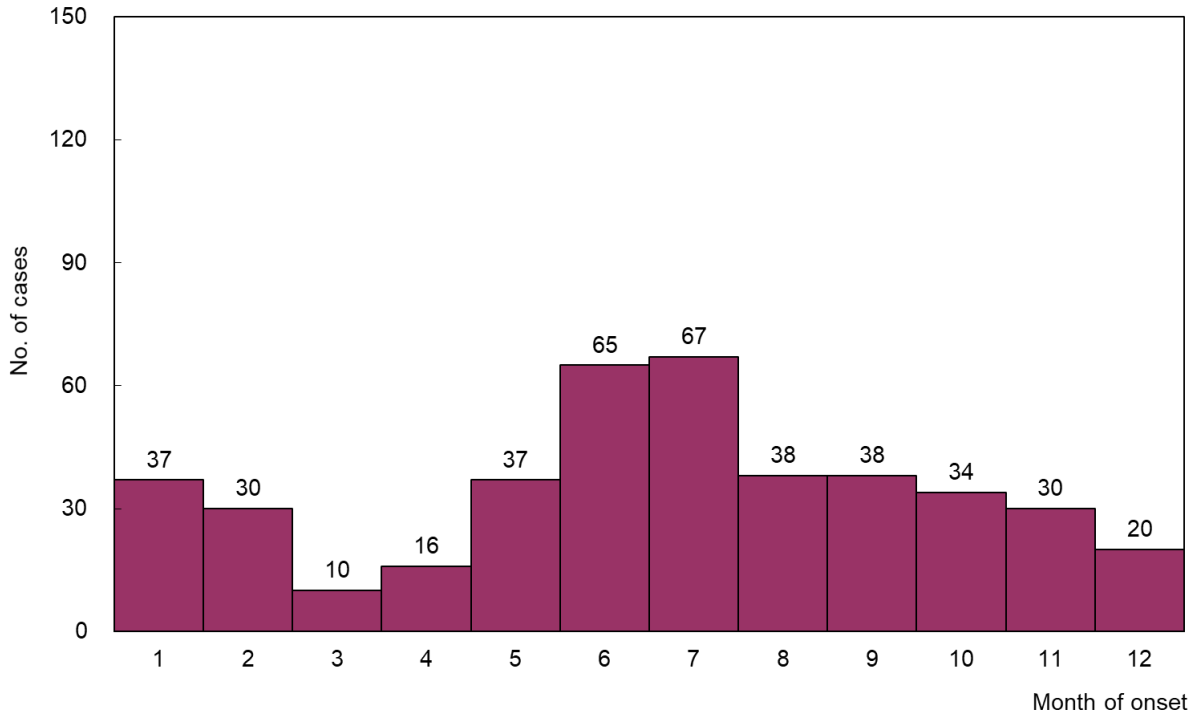

Figure 49 Number of confirmed scrub typhus cases, 2017

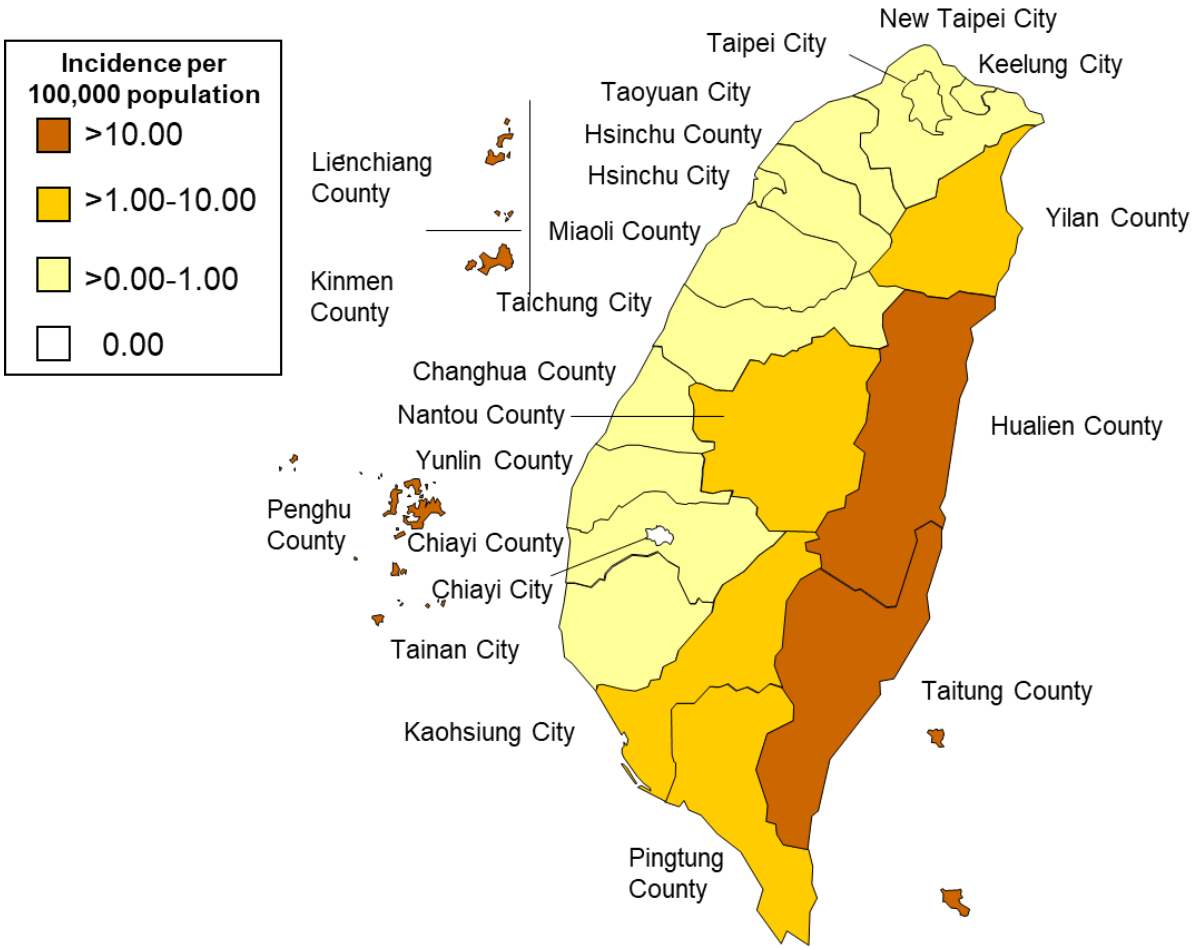

Figure 50 Geographical distribution by incidence of confirmed scrub typhus cases, 2017

Legionnaires' Disease

In 2017, 188 confirmed cases of legionnaires' disease (incidence rate: 0.80 per 100,000 population) were reported, which represented an increase compared to 114 confirmed cases (incidence rate: 0.48 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 153 male cases (81.4%) and 35 female cases (18.6%) with male to female ratio of 4.4:1.0.

(2) By age group

Most cases occurred in 40-64 years age group with 90 cases, followed by 90 cases in 65 years and over age group, and 10 cases in 25-39 years age group.

(3) By month

Confirmed cases were reported in each month of the year where November had the highest number of incidents with 25 confirmed cases reported, followed by June with 22 cases, May and December each with 20 cases, October with 19 cases, July with 16 cases, August with 14 cases, March and September each with 12 cases, April with 11 cases, January with 10 cases, and February with 7 cases.

(4) By residential region

New Taipei City had the highest number of incidents with 40 confirmed cases reported, followed by Taipei City with 32 cases, Taoyuan City with 20 cases, Kaohsiung City with 16 cases, Tainan City with 15 cases, Changhua County and Hualien County each with 10 cases, Taichung City with 9 cases, Pingtung County with 8 cases, and Yunlin County with 7 cases. The other cities and counties had less than 5 cases reported, in which Kinmen County, Lienchiang County, and Penghu County had no confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Hualien County (3.03), followed by Chiayi City (1.48) and Taipei City (1.19).

(5) Imported cases and countries of infection

There were 14 imported cases of legionnaires' disease in 2017, 10 cases from China, and Japan, Indonesia, Philippines and Italy each with 1 case.

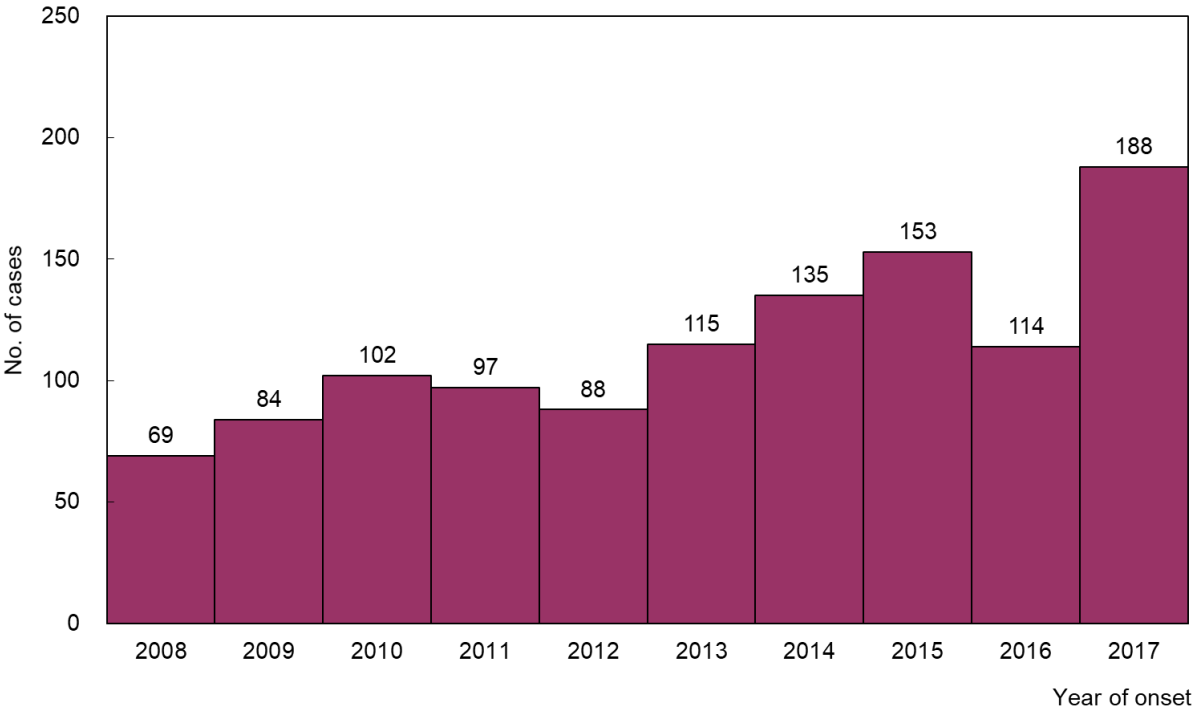

Figure 51 Number of confirmed legionnaires' disease cases, 2008-2017

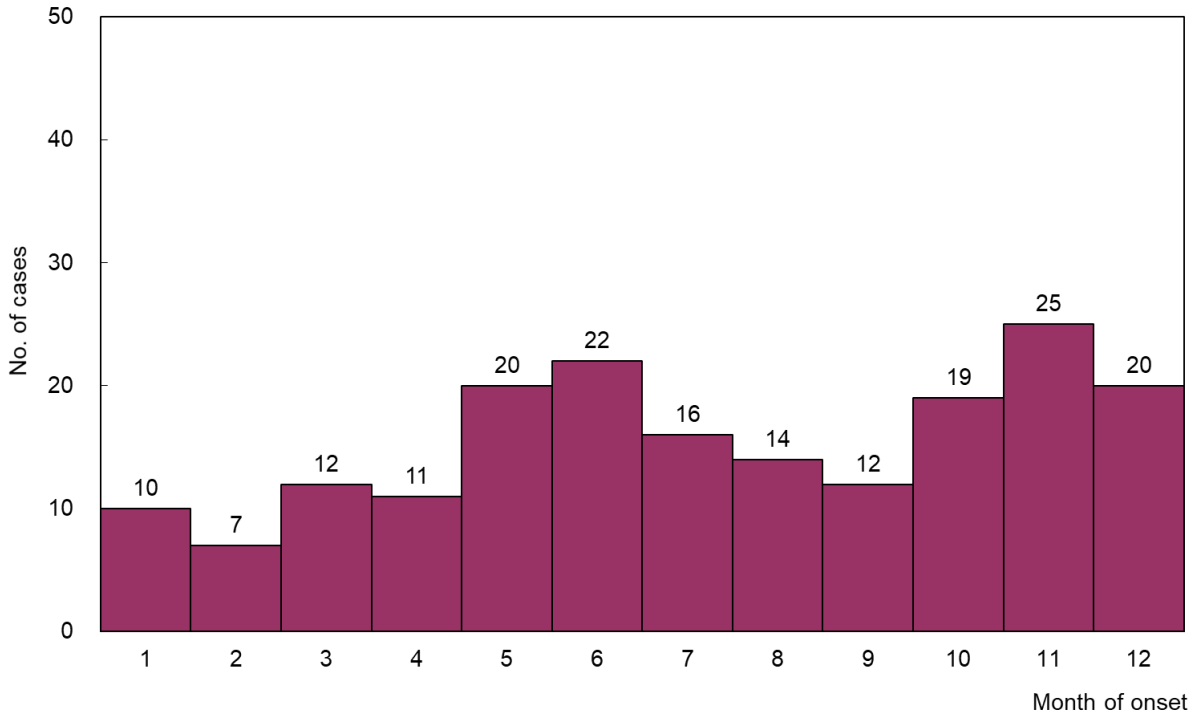

Figure 52 Number of confirmed legionnaires' disease cases, 2017

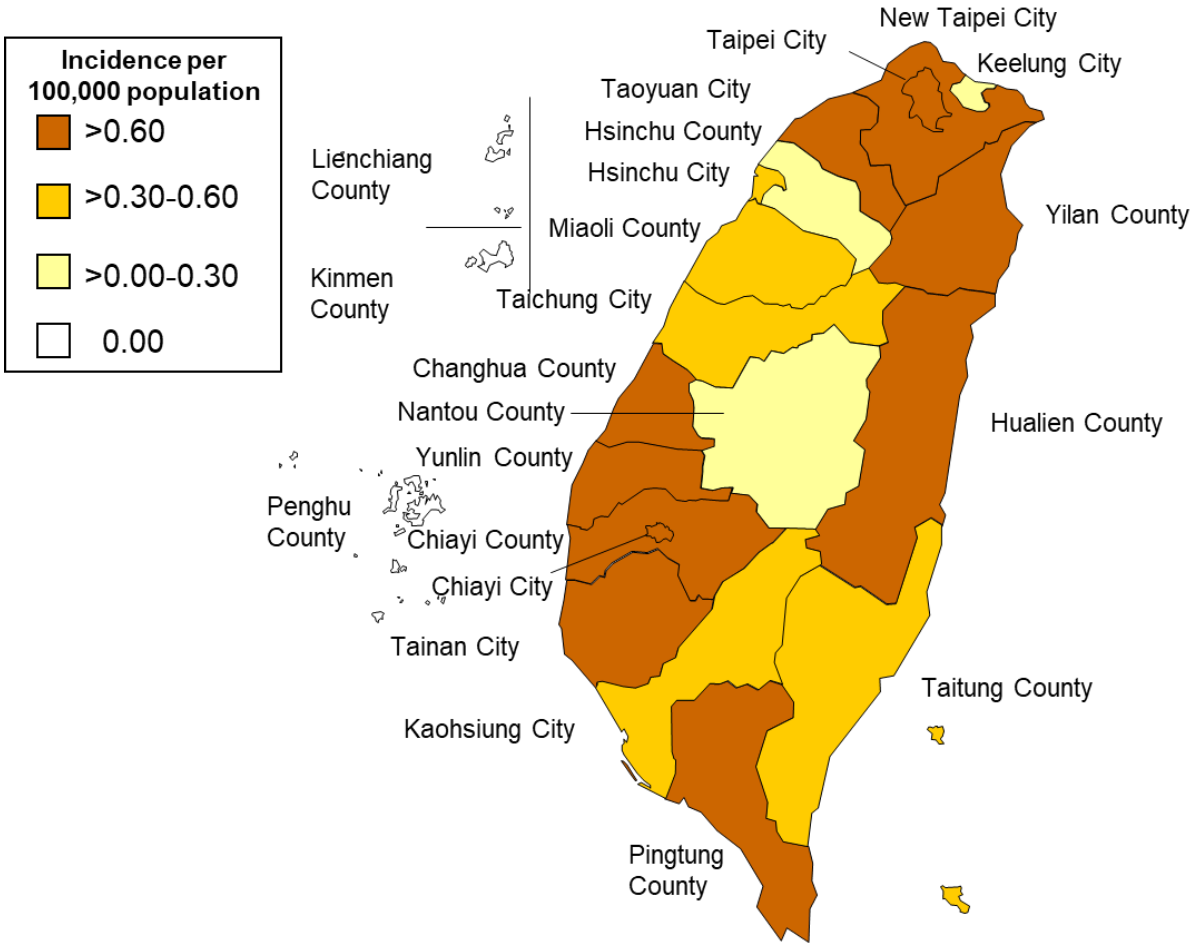

Figure 53 Geographical distribution by incidence of confirmed Legionnaires' Disease cases, 2017

Dengue Fever

In 2017, 343 confirmed cases of dengue fever (incidence rate: 1.46 per 100,000 population), including 333 imported cases and 10 indigenous cases were reported, which represented a decrease compared to a total of 744 confirmed cases (incidence rate: 3.16 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

In the 333 imported cases, there were 198 male cases (59.5%) and 135 female cases (40.5%) with male to female ratio of 1.5:1.0.

In the 10 indigenous cases, there were 8 male cases (80.0%) and 2 female cases (20.0%) with male to female ratio of 4.0:1.0.

(2) By age group

In the 333 imported cases, there were 19 case (5.7%) in 5-14 years age group, 51 cases (15.3%) in 15-24 years age group, 148 cases (44.4%) in 25-39 years age group, 104 cases (31.2%) in 40-64 years age group, and 11 cases (3.3%) in 65 years and over age group.

In the 10 indigenous cases, there were 2 cases (20.0%) in 25-39 years age group, 6 cases (60.0%) in 40-64 years age group, and 2 cases (20.0%) in 65 years and over age group.

(3) By month

In the 333 imported cases, confirmed cases were reported in each month of the year. In all, August had the highest number of incidents with 56 cases reported, followed by 46 cases in July, 43 cases in October, 30 cases each in January and September, 25 cases in November, 22 cases each in February, June, and December, 13 cases each in March and May, and 11 cases in April.

In the 10 indigenous cases, October had the highest number of incidents with 4 confirmed cases reported, followed by 3 cases each in July and September. There were no cases in the other months.

(4) By residential region

In the 363 imported cases, the number of incidents was the highest in Taipei City with 67 cases reported, followed by 62 cases in New Taipei City, 43 cases in Taoyuan City, 42 cases in Taichung City, 34 cases in Kaohsiung City, 18 cases in Tainan City, and 13 cases in Changhua County. The other cities and counties all had less than 10 imported cases reported, in which Kinmen County, Lienchiang County and Taitung County did not have confirmed imported cases.

In the 10 indigenous cases, New Taipei City had the highest number of incidents with 6 cases reported, followed by 3 cases in Kaohsiung City, and 1 case each in Taoyuan City, in which other cities and counties did not have confirmed indigenous cases.

Overall, the incidence rate of confirmed cases per 100,000 population was the highest in Taipei City (2.49), followed by Taoyuan City (2.03) and Nantou County (1.79).

(5) Imported cases and countries of infection

In the 333 imported cases, there were 104 cases (31.2%) from Vietnam, 42 cases each (12.6% respectively) from Thailand and Malaysia, 39 cases (11.7%) from Philippines, 29 cases (8.7%) from Myanmar, 27 cases (8.1%) from Indonesia, 13 cases (3.9%) from India, 10 cases (3.0%) from Singapore, 8 cases (2.4%) from Cambodia, 7 cases (2%) from Maldives, 3 cases (0.9%) from Bangladesh, 2 cases (0.6%) from Mexico, and 1 case each (0.3% respectively) from China, Marshall Islands, Palau, Laos, Sri Lanka, Ecuador and French Polynesia.

(6) By virus type

In the 333 cases, 48 cases were caused by dengue virus type 1, 38 cases by type 2, 21 cases by type 3, and 20 cases by type 4. The other 206 cases were undetermined.

In the 10 indigenous cases, 3 cases were caused by dengue virus type 1 and 1 case by type 3. The other 6 cases were undetermined.

Table 26 Virus type and infection source of confirmed dengue fever cases, 2017

Infection source	Virus type					Total
	DEN-1	DEN-2	DEN-3	DEN-4	undetermined	
Vietnam	27	5		6	66	104
Thailand	2	12		3	25	42
Malaysia		6	5	1	30	42
Philippines	4	3	5	4	23	39
Myanmar	5		2	3	19	29
Indonesia	4	1	8	2	12	27
India	2	2	1		8	13
Singapore	1				9	10
Cambodia	1	2		1	4	8
Maldives		5			2	7
Bangladesh		1			2	3
Mexico					2	2
China	1					1
Marshall Islands					1	1
Palau		1				1
Laos					1	1
Sri Lanka					1	1
Ecuador					1	1
French Polynesia	1					1
Taiwan	3		1		6	10
Total	51	38	22	20	212	343

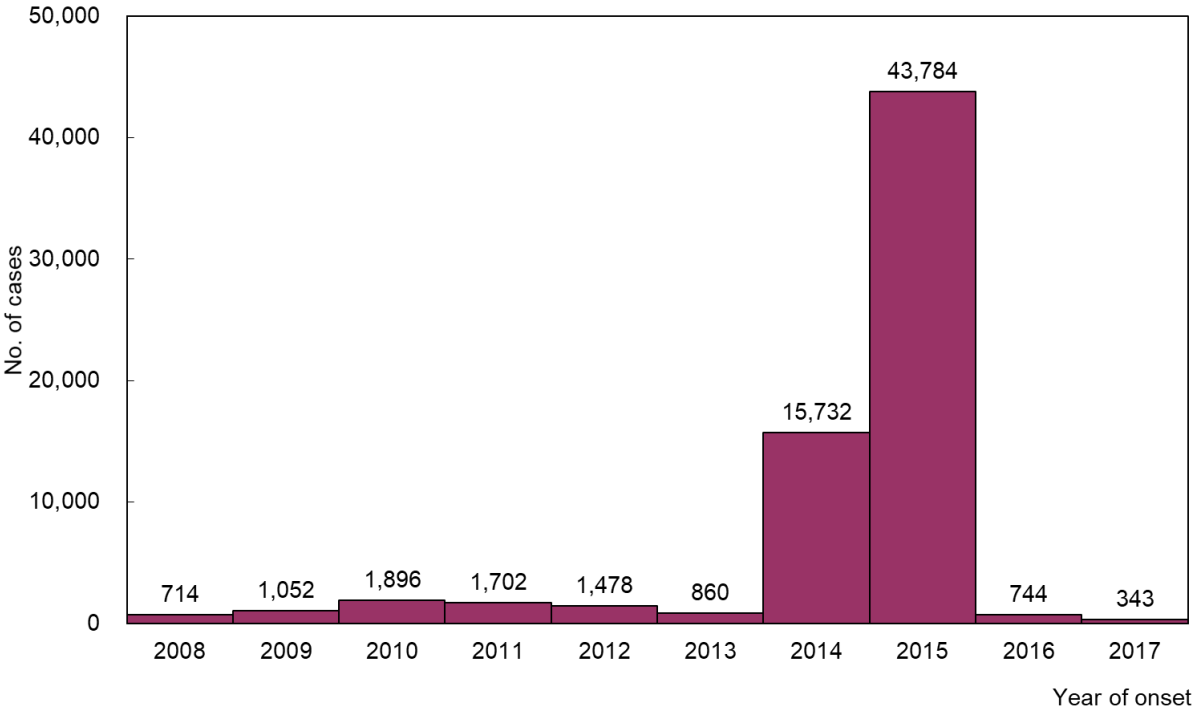

Figure 54 Number of confirmed dengue fever cases, 2008-2017

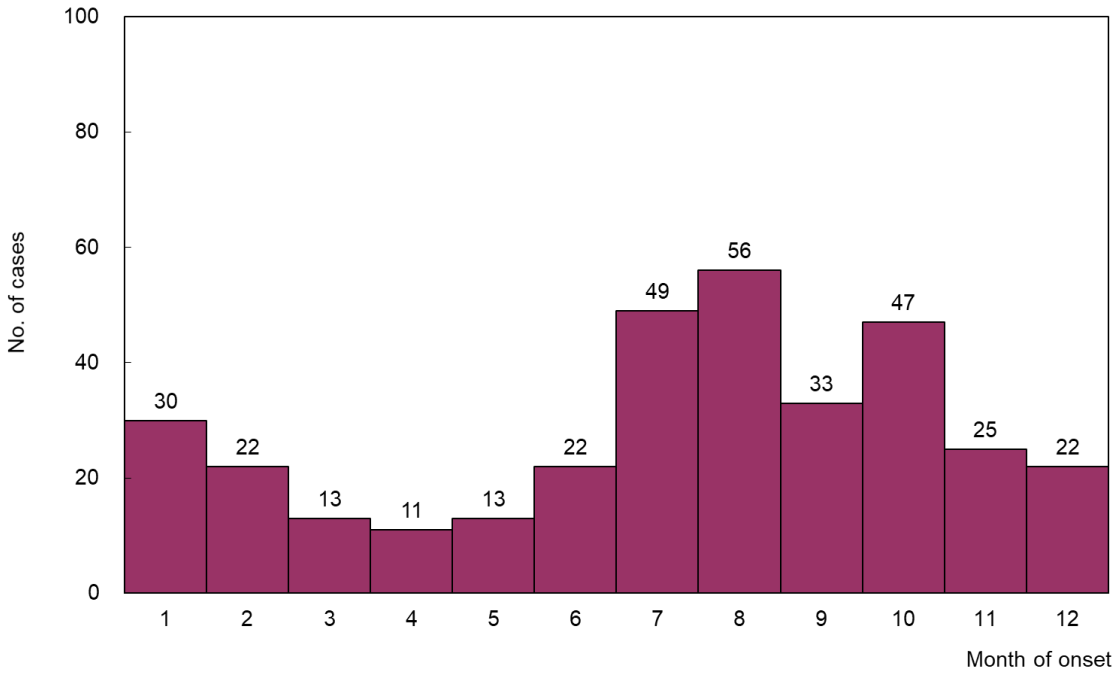

Figure 55 Number of confirmed dengue fever cases, 2017

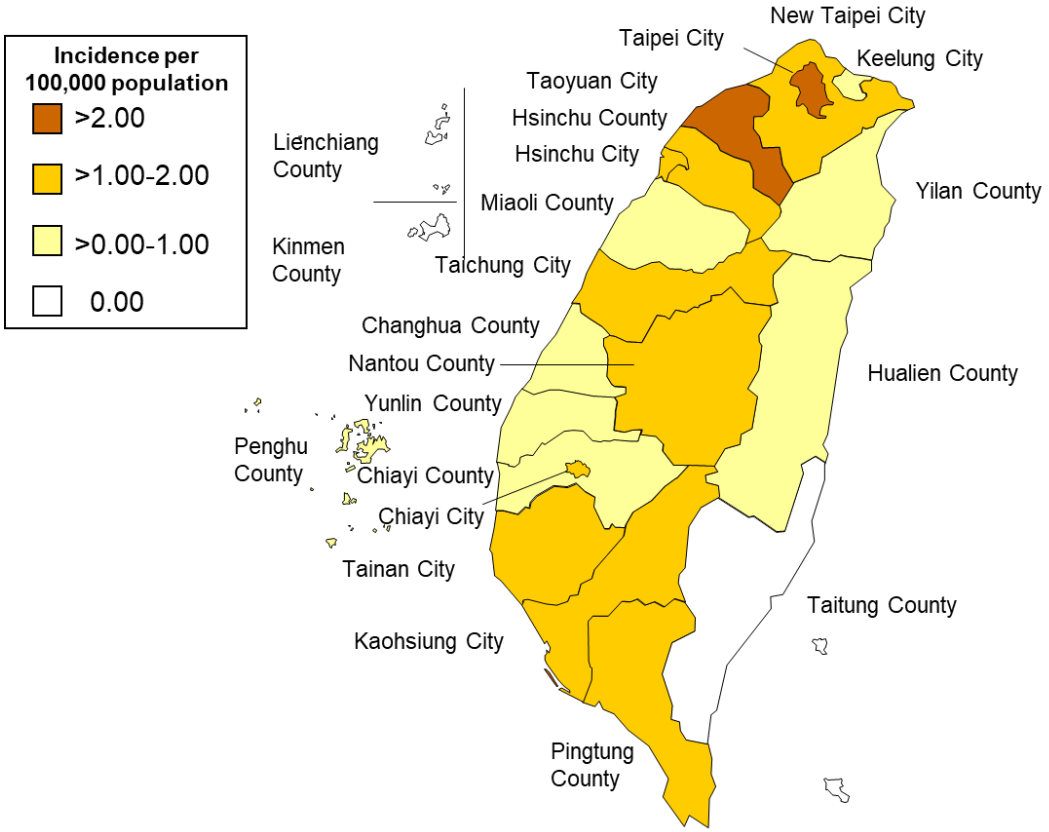

Figure 56 Geographical distribution by incidence of confirmed dengue fever cases, 2017

Enteroviruses Infection with Severe Complications

In 2017, 24 confirmed cases of enteroviruses infection with severe complications (incidence rate: 0.10 per 100,000 population) were reported, which represented a decrease compared to 33 confirmed cases (incidence rate: 0.14 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 13 male cases (52.4%) and 11 female cases (45.8%) with male to female ratio of 1.2:1.0.

(2) By age group

There were 11 cases in 5-14 years age group, followed by 9 cases in 1-4 year age group, 3 cases in 0-1 years age group, and 1 case in 15-24 years age group.

(3) By month

In addition to January, March, May and September did not have confirmed cases, the other months had confirmed cases. 10 cases in December, 3 cases each in June and November, 2 cases each in July, August and October, and 1 case each in February and April.

(4) By residential region

Taichung City, Tainan City, and Kaohsiung City each had 4 cases reported, followed by 3 cases in Taoyuan City, and 1 case each in Taipei City, New Taipei City, Hsinchu County, Changhua County, Chiayi County, Hualien County and Taitung County. The other cities and counties did not have confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Taitung County (0.45), followed by Miaoli County (0.36) and Hualien County (0.30).

(5) Imported cases and countries of infection

There were no imported cases of enteroviruses infection with severe complications in 2017.

(6) Pathogen identification

Assay with enzyme-linked immunosorbent assays (ELISA) of IgM, virus culture, and RT-PCR were adopted for testing. Enterovirus 68 was the main virus isolated in 12 cases. There were 12 cases found to be infected with other types, including 3 cases of Coxsackievirus A6, 2 cases each of Enterovirus 71, Echovirus 5, Coxsackievirus A9, and Coxsackievirus B3. There was 1 case infected with Coxsackievirus A2.

Table 27 Number of confirmed enteroviruses infection with severe complications cases by age, 2014-2017

	2014		2015		2016		2017	
	No. (	%)	No. (	%)	No. (	%)	No. (	%)
>=0, <7m	2 (	33.3)	6 (	100.0)	3 (	9.1)	2 (	8.3)
>=7m, <1yr	1 (	16.7)	- (	-)	2 (	6.1)	1 (	4.2)
>=1, <4 yrs	3 (	50.0)	- (	-)	22 (	66.7)	6 (	25.0)
>=4, <7 yrs	- (	-)	- (	-)	6 (	18.2)	10 (	47.12)
>=7, <16 yrs	- (	-)	- (	-)	- (	-)	5 (	20.8)
>=16 yrs	- (	-)	- (	-)	- (	-)	- (	-)
Unknown	- (	-)	- (	-)	- (	-)	- (	-)
Total	6 (	100.0)	6 (	100.0)	33 (	100.0)	24 (	100.0)

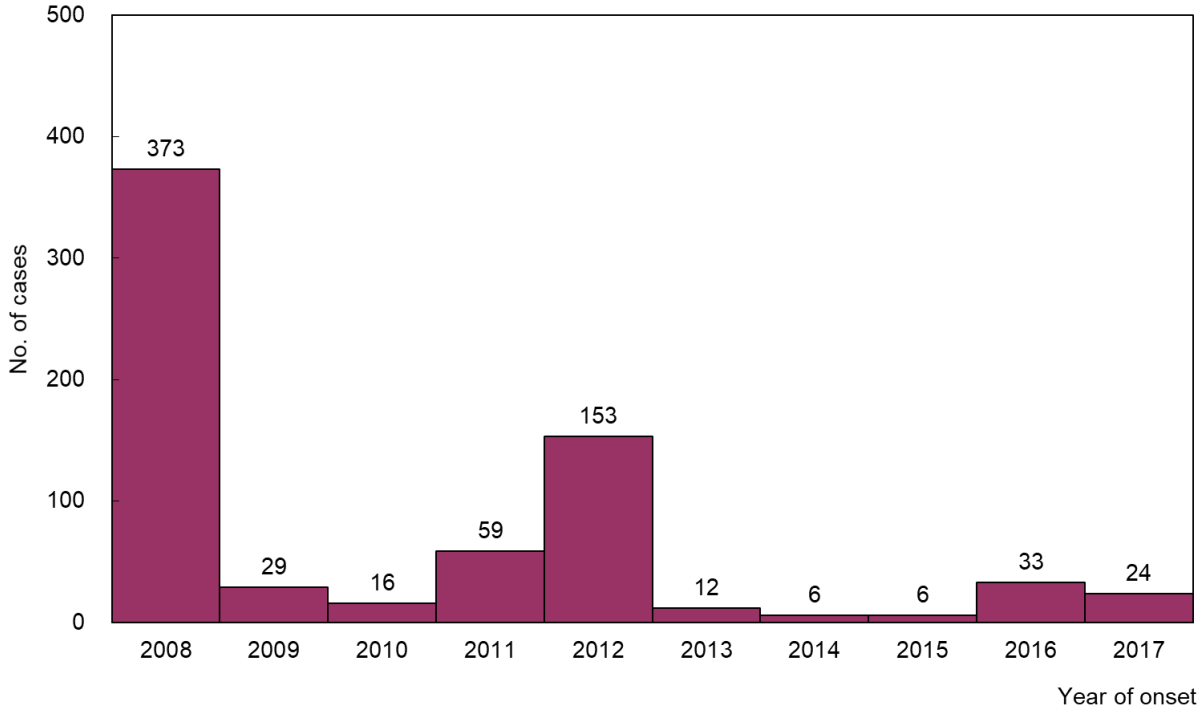

Figure 57 Number of confirmed enteroviruses infection with severe complications cases, 2008-2017

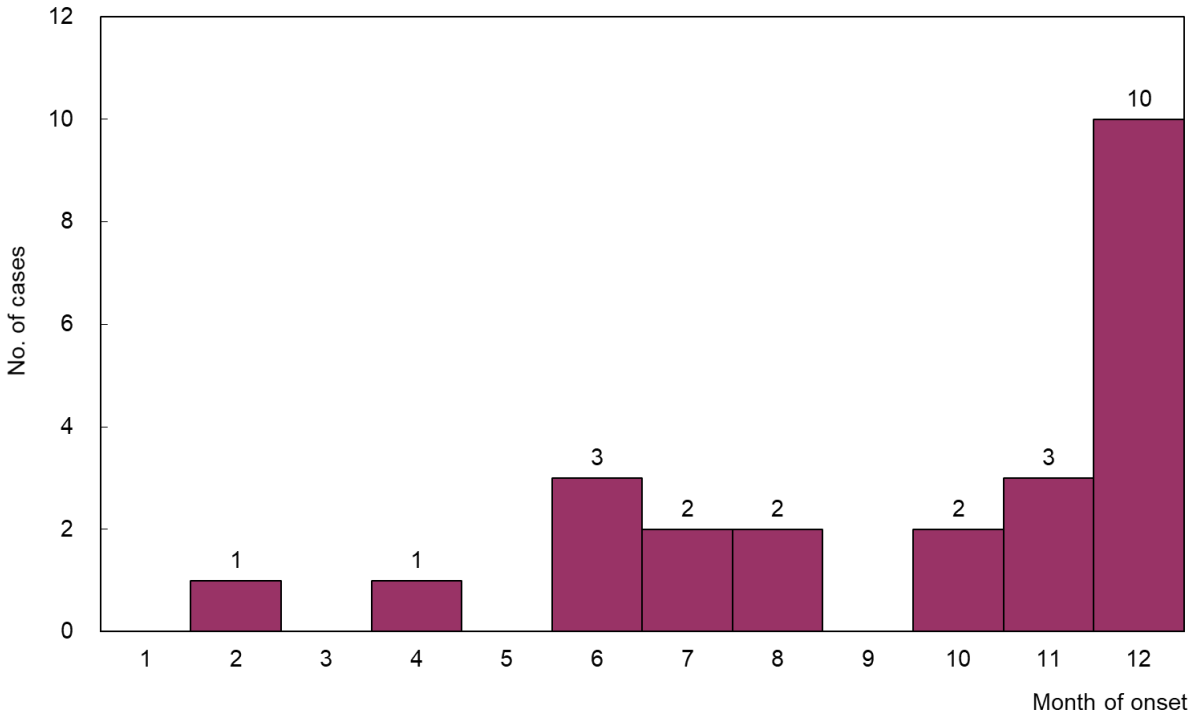

Figure 58 Number of confirmed enteroviruses infection with severe complications cases, 2017

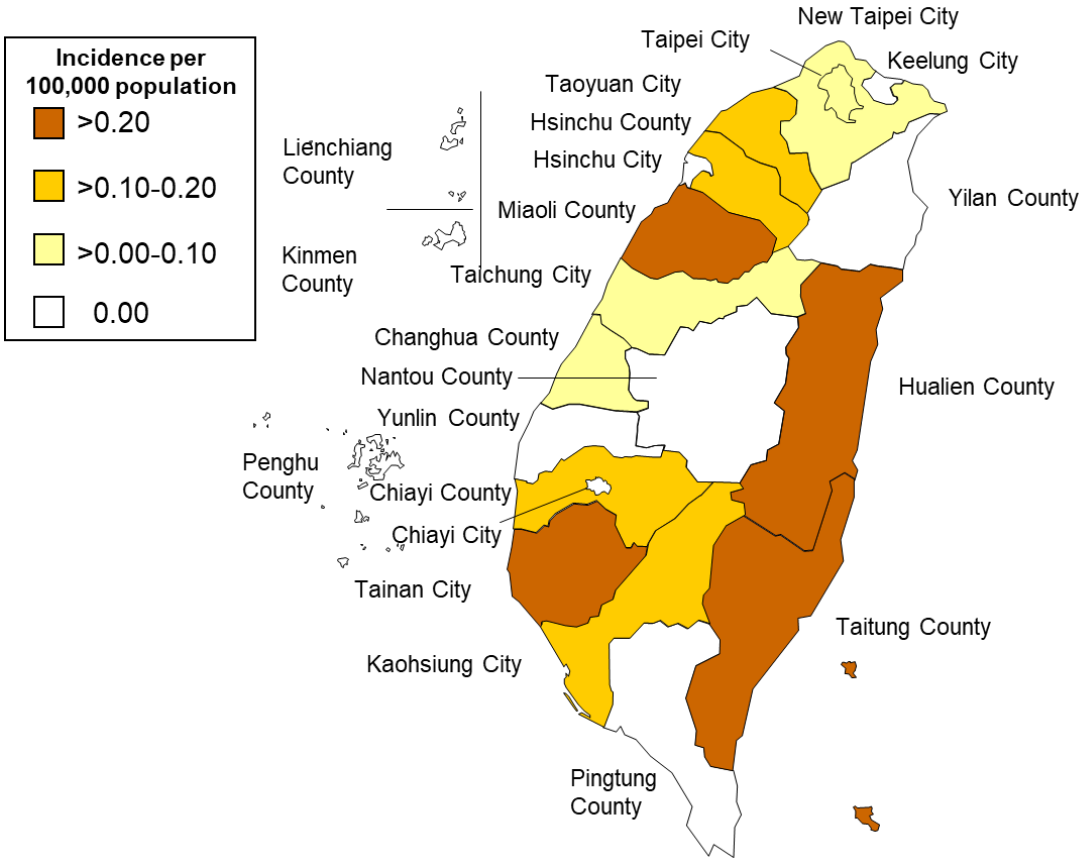

Figure 59 Geographical distribution by incidence of confirmed enteroviruses infection with severe complications cases, 2017

Malaria

In 2017, 7 confirmed cases of malaria (incidence rate: 0.03 per 100,000 population) were reported, which represented a decrease compared to 13 confirmed cases (incidence rate: 0.06 per 100,000 population) in 2016. All cases in 2017 were imported. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 6 male cases (85.7%) and 1 female case (14.3%) with male to female ratio of 6.0:1.0.

(2) By age group

The cases occurred mostly in 25-39 and 40-64 years age groups with 3 cases reported each, followed by 15-24 years age group with 1 case.

(3) By month

There were 2 cases each in June, July and September, 1 case in April.

(4) By residential region

Tainan City had 2 cases reported, followed by 1 case each in Taipei City, Taoyuan City, Nantou County, Kaohsiung City and Hualien County. The other cities and counties did not have confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Hualien County (0.30), followed by Nantou County (0.20) and Tainan City (0.11).

(5) Imported cases and countries of infection

In the 7 imported cases, 1 case (14.3%) was from Indonesia; 6 cases (85.7%) were from Africa, specifically 2 cases from Nigeria, and 1 case each from Equatorial Guinea, Burkina Faso, South Africa and Ivory Coast.

(6) Types of protozoan parasites

By the types of protozoan parasites, there were 5 cases of *Plasmodium falciparum* infection, 1 case of *Plasmodium vivax*, and 1 case co-infected with *Plasmodium* parasites.

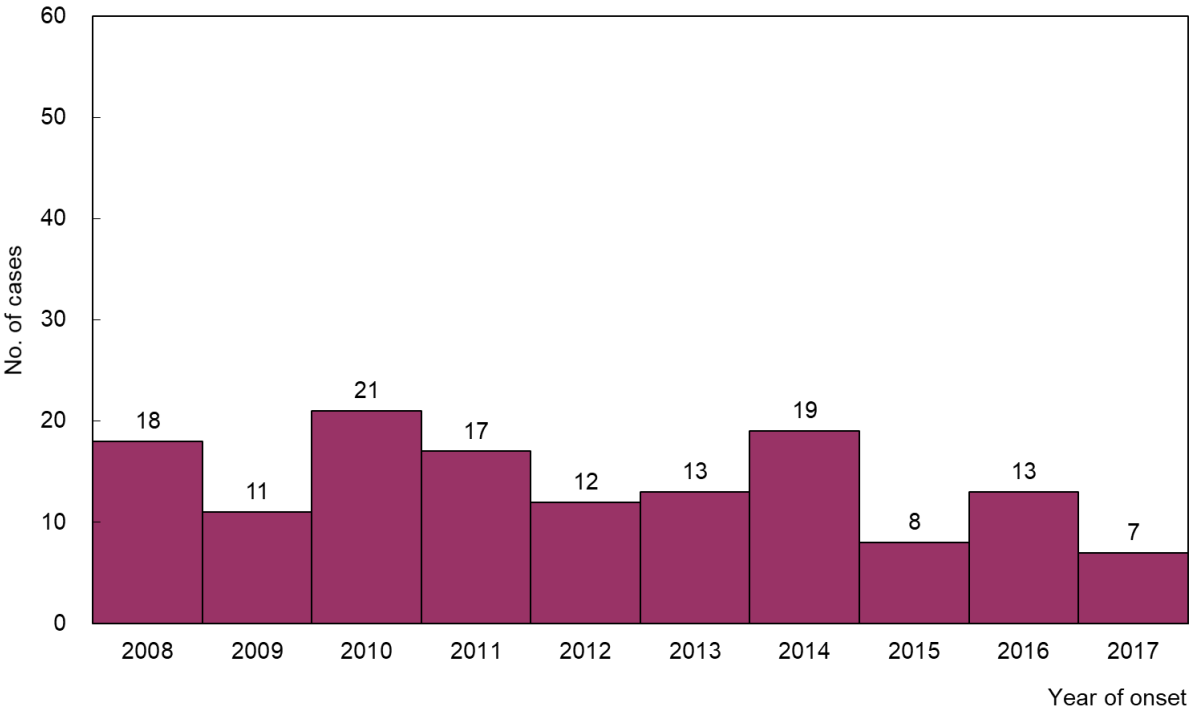

Figure 60 Number of confirmed imported malaria cases, 2008-2017

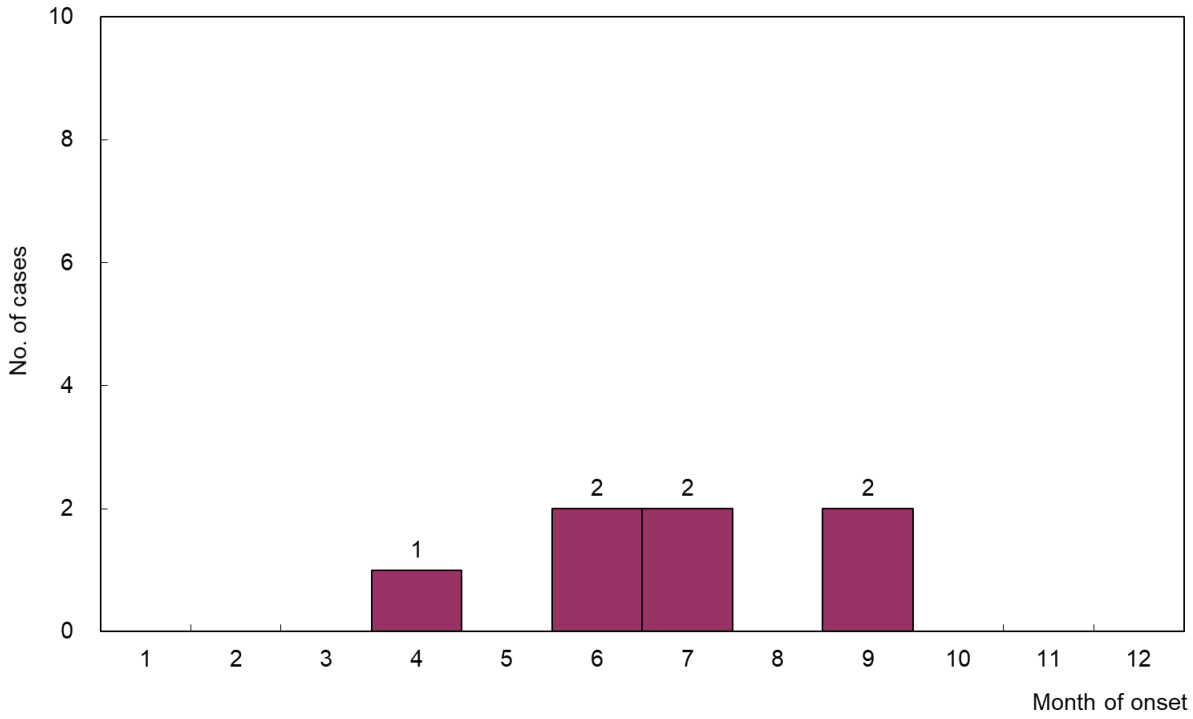

Figure 61 Number of confirmed imported malaria cases, 2017

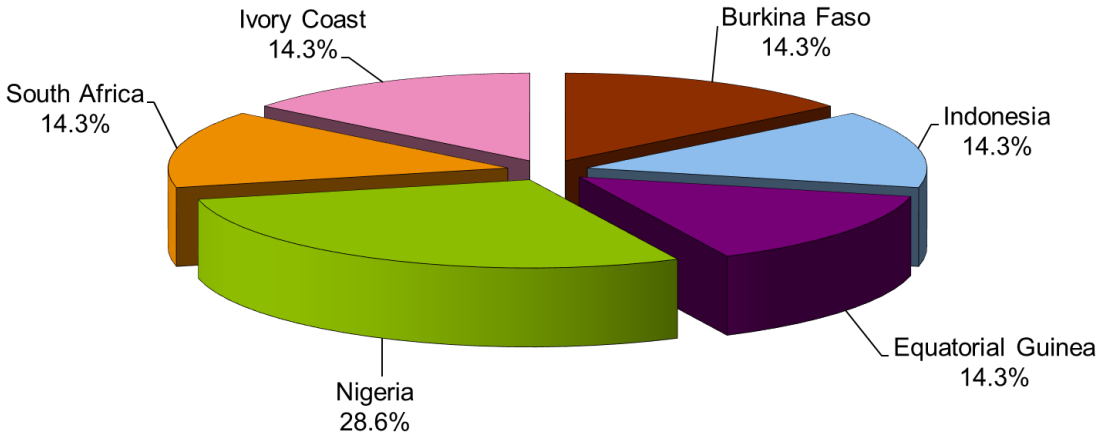

Figure 62 Infections source of confirmed imported malaria cases, 2017

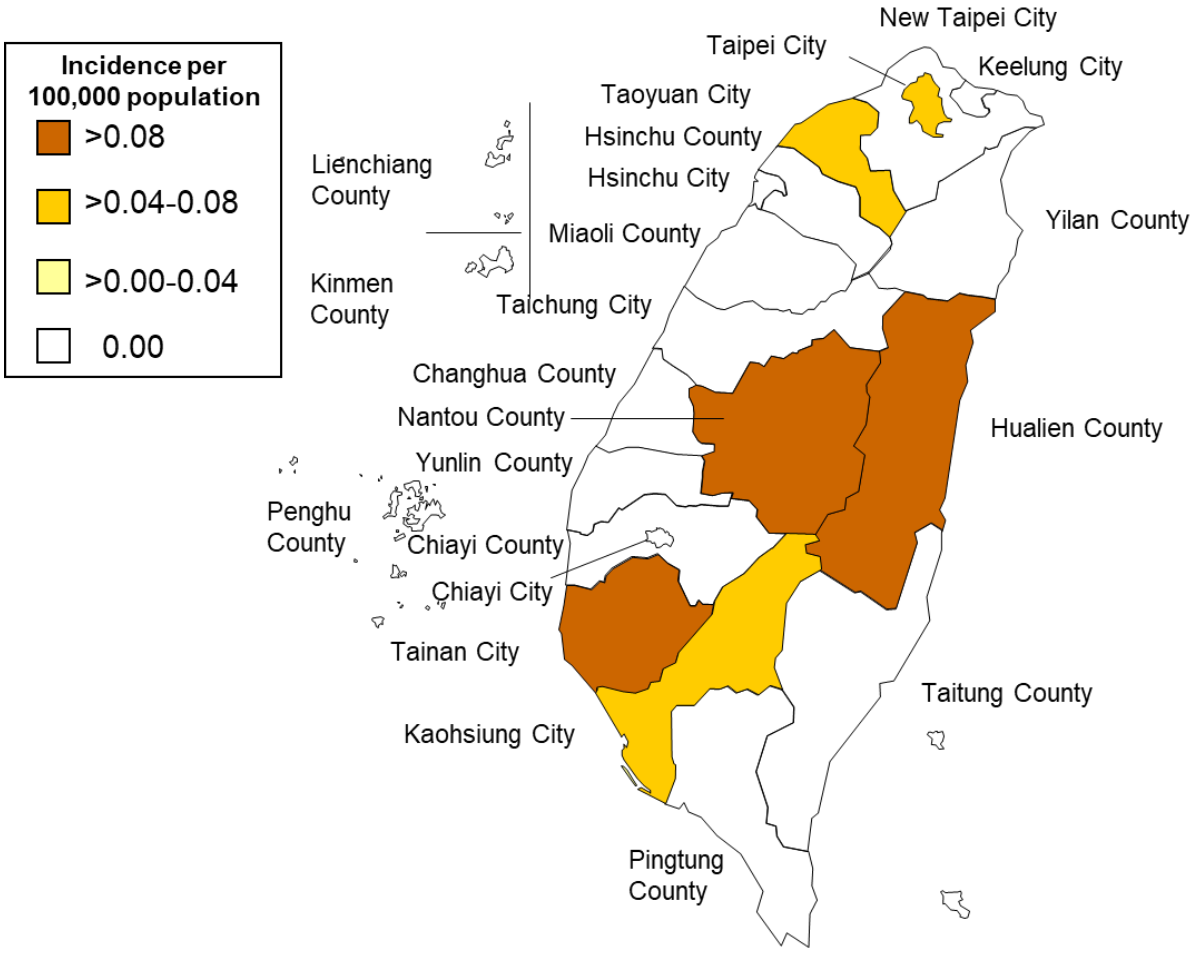

Figure 63 Geographical distribution by incidence of confirmed imported malaria cases, 2017

Shigellosis

In 2017, 162 confirmed cases of shigellosis (incidence rate: 0.69 per 100,000 population) were reported, which represented a decrease compared to 225 confirmed cases (incidence rate: 0.96 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

In the 58 imported cases, there were 15 male cases (25.9%) and 43 female cases (74.1%) with male to female ratio of 0.3:1.0.

In the 104 indigenous cases, there were 91 male cases (87.5%) and 13 female cases (12.5%) with male to female ratio of 7.0:1.0.

(2) By age group

In the 58 imported cases, there were 34 cases in 25-39 years age group, 16 cases in 15-24 years age group, 6 cases in 40-64 years age group, and 1 case each in 1-4 and 5-14 years age groups.

In the 104 indigenous cases, there were 54 cases in 25-39 years age group, 25 cases in 40-64 years age group, 20 cases in 15-24 years age group, 4 cases in 1-4 years age group, and 1 case in 65 years and over age group.

(3) By month

In the 58 imported cases, confirmed cases were reported in each month of the year where April had the highest number of incidents with 10 confirmed cases reported, followed by 7 cases in January, 6 cases each in February and March, 5 cases each in July and October, 4 cases each in September, November and December, 3 cases each in May and June, and 1 case in August.

In the 104 indigenous cases, confirmed cases were reported in each month of the year. February and November each had the highest number of incidents with 12 confirmed cases reported, followed by 11 cases each in March and April, 10 cases in October, 9 cases each in May and June, 7 cases each in January and September, 6 cases in December, 5 cases each in July and August.

(4) By residential region

In the 58 imported cases, Taichung City had the highest number of incidents with 11 confirmed cases reported, followed by New Taipei City with 10 cases, Taoyuan City with 6 cases, Taipei City with 5 cases, Yilan County, Yunlin County, and Changhua County each with 4 cases, Hsinchu County with 3 cases, Chiayi City and Tainan City each with 2 cases, and Hsinchu City, Miaoli County, Nantou County, Chiayi City, Kaohsiung City, Penghu County and Hualien County each with 1 case.

In the 104 indigenous cases, New Taipei City had the highest number of incidents with 43 confirmed cases reported, followed by Taipei City with 16 cases, Taoyuan City and Taichung City each with 9 cases, Hsinchu City and Tainan City each with 6 cases, Hsinchu County, Yunlin County and Hualien County each with 3 cases, Miaoli County and Kaohsiung City each with 2 cases, Keelung County and Taitung County each with 1 case. There were no cases reported in other cities and counties.

In all, the incidence rate of confirmed cases per 100,000 population was the highest in Hsinchu City (1.59). New Taipei City ranked in the second place with incidence rate of 1.33, and Hualien County ranked in the third place with 1.21.

(5) Imported cases and countries of infection

In the 58 imported cases, 49 cases were from Indonesia, 3 cases from China, 2 cases from Cambodia, and 1 case each from Hong Kong, Philippines, India and Kenya.

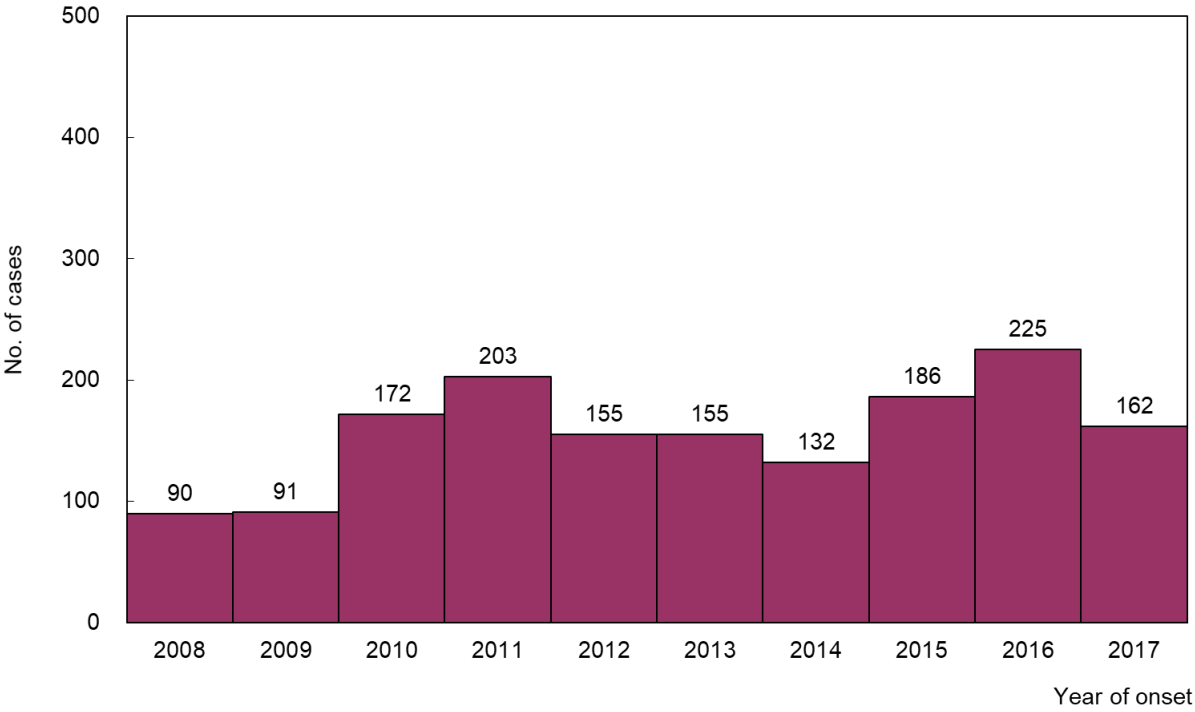

Figure 64 Number of confirmed shigellosis cases, 2008-2017

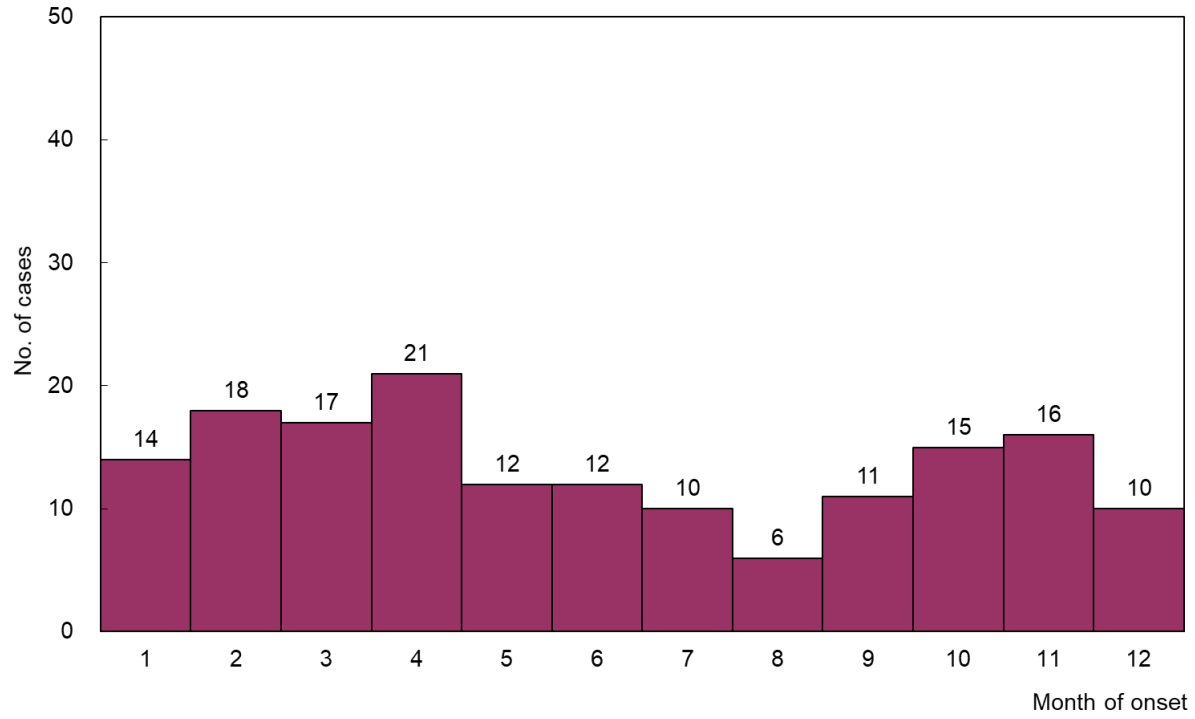

Figure 65 Number of confirmed shigellosis cases, 2017

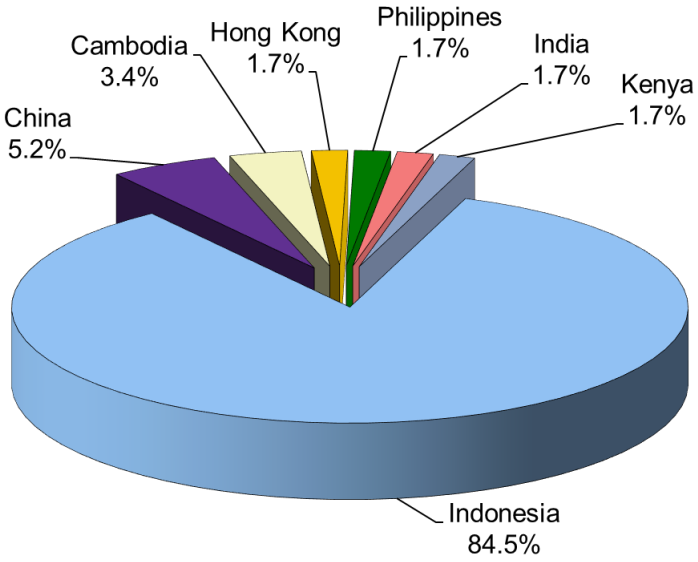

Figure 66 Infections source of confirmed imported shigellosis cases, 2017

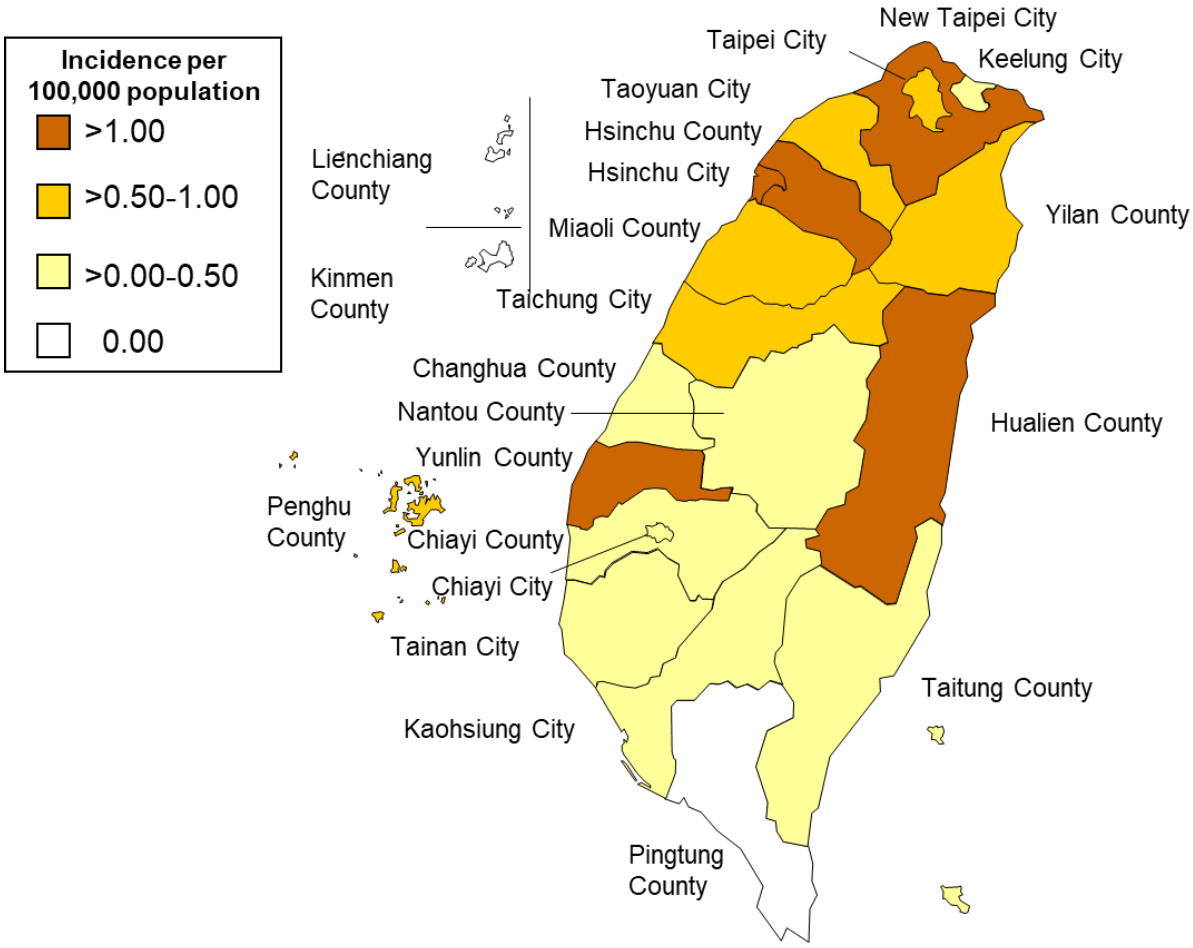

Figure 67 Geographical distribution by incidence of confirmed shigellosis cases, 2017

Severe Complicated Influenza

In 2017, 1,359 confirmed cases of severe complicated influenza (incidence rate: 5.77 per 100,000 population) were reported, which represented a decrease compared to 2,084 confirmed cases (incidence rate: 8.86 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 782 male cases (57.5%) and 577 female cases (42.5%) with male to female ratio of 1.4:1.0.

(2) By age group

There were 903 cases in 65 years and over age group, 329 cases in 40-64 years age group, 45 cases in 25-39 years age group, 32 cases in 1-4 years age group, 28 cases in 5-14 years age group, 18 cases in 15-24 year age group, and 4 cases in 0-1 year age group.

(3) By month

The confirmed cases were concentrated in May through August with more than 100 cases reported in each of the months. July had the highest number of incidents with 385 cases reported, followed by June with 347 cases, August with 138 cases, May with 126 cases, December with 64 cases, February and September each with 52 cases, April with 50 cases, January with 48 cases, March with 46 cases, October with 27 cases, and November with 24 cases.

(4) By residential region

All cities and counties had confirmed cases of severe complicated influenza reported in 2017. Kaohsiung City had the highest number of incidents with 199 confirmed cases reported, followed by New Taipei City with 184 cases, Tainan City with 162 cases, Taipei City with 139 cases, Taichung City with 108 cases, Changhua County with 85 cases, Taoyuan City with 84 cases, Pingtung County with 72 cases, Yunlin County with 61 cases, Chiayi County with 45 cases, Nantou County with 41 cases, Yilan County with 35 cases, Miaoli County with 30 cases, whereas the other cities and counties all had less than 30 cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Taitung County (9.54), followed by Yunlin County (8.81) and Chiayi County (8.77).

(5) Imported cases and countries of infection

In the 7 imported cases, there were 6 cases from China and 1 case from Japan.

(6) By virus type

By virus type, there were 1,185 cases associated with influenza A viruses (1,073 cases of H3, 62 cases of H1, and 50 cases were untyped), 173 cases associated with influenza B viruses, and 1 case co-infected with both A and B viruses.

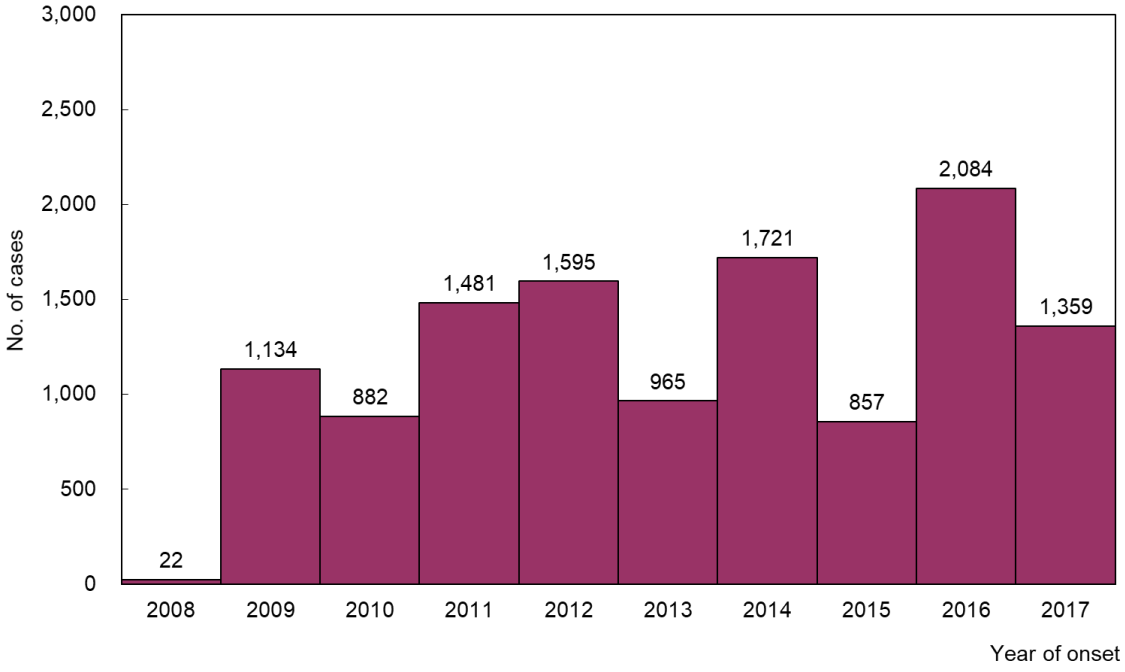

Figure 68 Number of confirmed severe complicated influenza cases, 2008-2017

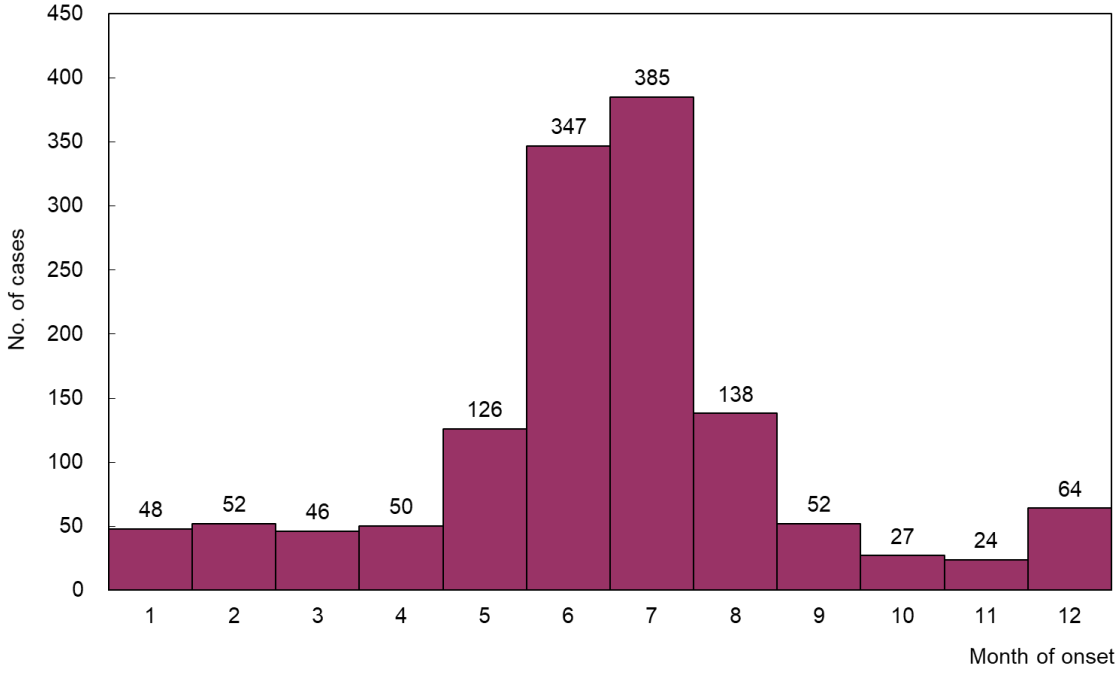

Figure 69 Number of confirmed severe complicated influenza cases, 2017

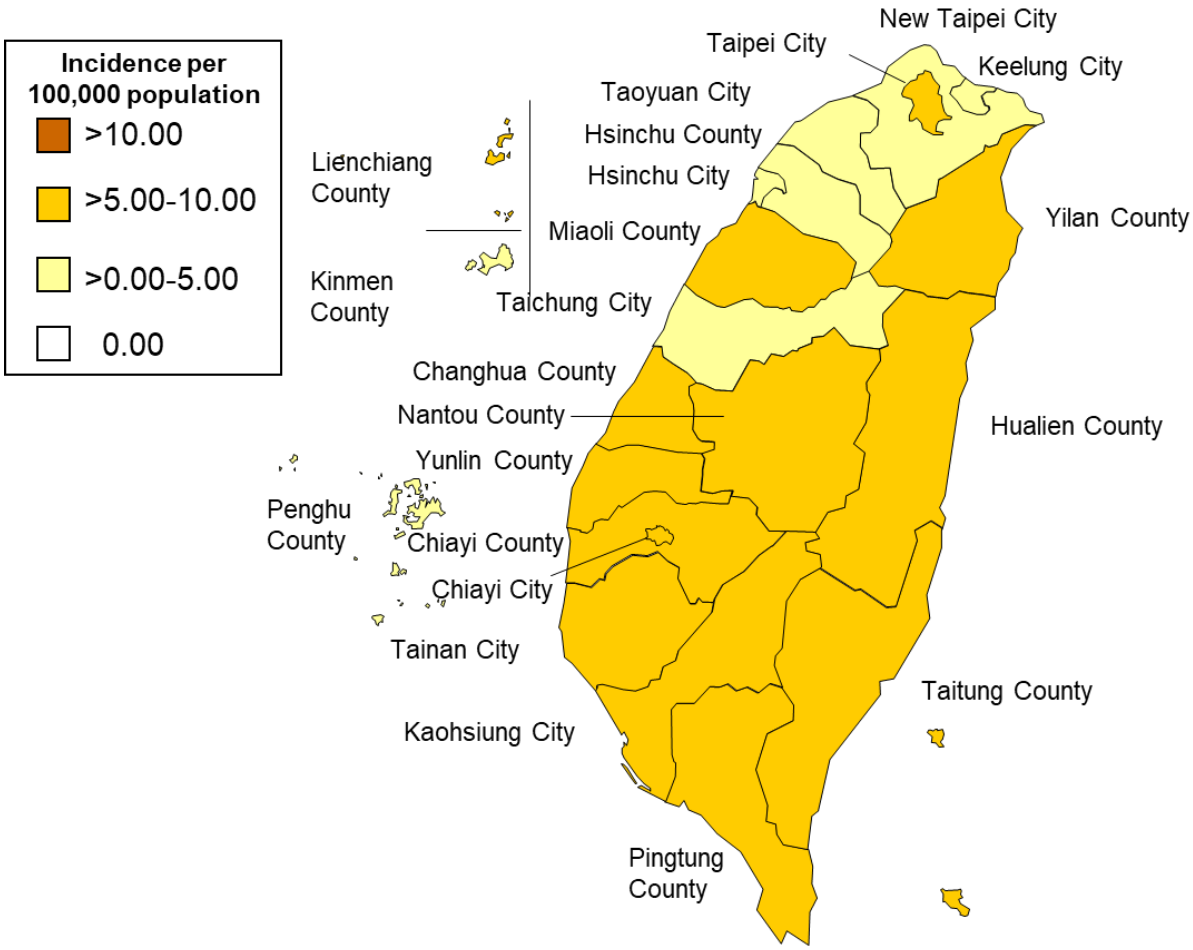

Figure 70 Geographical distributions by incidence of confirmed severe complicated influenza cases, 2017

Government-funded influenza vaccination coverage rate

In the government-funded influenza vaccination program for influenza season 2016-2017, as recommended by Influenza Control and Prevention Division and the Immunization Division under the Ministry of Health and Welfare Infectious Disease Control and Prevention Advisory Committee during the Influenza Control and Prevention Advisory Meeting, trivalent inactivated influenza vaccines (TIV) were used in ten high-risk groups, including the elders aged more than 65 years, adults aged 50 to 64 years, pre-school children aged 6 months through 6 years, students aged 7 years through 18 years, residents and staff in nursing homes and other long-term care facilities, healthcare and public health personnel, poultry or livestock farmers and animal health inspectors, people with catastrophic illness and 19-49 years of age who have underlying medical conditions, and pregnant and 6-months postpartum women. In December 2016, the program was expanded to include all citizens aged 6 months and older. The influenza vaccine uptake rates obtained via the Influenza Vaccine Information System (IVIS) in this influenza season, were described below:

(1) Coverage by high-risk groups (See Table 28 for more details)

The coverage rates for each group were as follows: the elders aged more than 65 years: 1,459,960 people/48%; adults aged 50 to 64 years: 1,035,534 people/20.1%; pre-school children aged 6 months through 6 years with at least one dose: 543,296 people/47.9%; students aged 7 years through 18 years: 1,984,650 people/75.1%; staff in nursing homes and other long-term care facilities: 35,152 people/95.7%; people with catastrophic illness: 39,250 people; healthcare workers: 212,789 people/72.9%; public health personnel: 25,655 people/ 84.8%; poultry or livestock farmers and animal health inspectors: 11,532 people/99%; 19-49 years of age who have underlying medical conditions: 63,142 people; pregnant and 6-months postpartum women: 59,984 people; others: 330,198 people.

(2) Usage by months (See Figures 71 and 72 for more details)

Most of the recipients received the vaccines during the period of October 1 to November 30. Up to 91% of 0.5mL influenza vaccines were administered by end of November after the government-funded vaccines became available. The vaccine use rate then increased slowly after November, and by the end of December, the vaccine use rate was 99%. After the end of February 2017, the percentage of vaccines administered was kept at 99.9%.

As for 0.25mL influenza vaccines, the percentage of the vaccines administered reached 97.8% by the end of November since the vaccines

became available. The percentage then increased slowly, and reached 99.9% by end of December. After the end of February 2017, the percentage was kept at 99.9%.

(3) Coverage by cities/counties (See Table 29 for more details)

The average coverage rate of government-funded influenza vaccine was 43.5%. The coverage rates were highest in Central Taiwan Central Taiwan for 46.9%, followed by 46.8% and 44.7% in both Northern Taiwan and southern Taiwan. The coverage rate in Chiayi City was 54.6%, which was the highest among all cities and counties. In Lienchiang County, Changhua County, Taoyuan City, Yilan County, Hsinchu City, Nantou County, Chiayi County, Taichung City, Hualien County, Hsinchu County, Yunlin County, Kaohsiung City, Miaoli County and Taitung County the coverage rates were higher than average.

Table 28 Government-funded influenza vaccination coverage rates by high-risk groups, 2016-2017

High-risk groups	No. of Vaccine	Coverage rates
Elders aged more than 65 years*	1,459,960	48.0%
Adults aged 50 to 64 years	1,035,534	20.1%
Pre-school children aged 6 months through 6 years with at least one dose	543,296	47.9%
Students aged 7 years through 18 years	1,984,650	75.1%
People with catastrophic illness	39,250	-
Staff in nursing homes and other long-term care facilities	35,152	95.7%
Healthcare workers	386,061	77.8%
Registered health care workers	212,789	72.9%
Others workers in the hospitals	87,572	93.0%
Public health personnel	25,655	84.8%
Infection control workers	12,372	99.8%
Emergency medical technicians	5,306	78.1%
Airborne service corps	101	38.1%
Coast guards	2,294	79.6%
Border control workers	1,688	31.1%
Poultry or livestock farmers and animal health inspectors	11,532	99.0%
19-49 years of age who have underlying medical conditions	63,142	-
Pregnant and 6-months postpartum women	59,984	-
Others	330,198	-

*including residents in long term care facilities

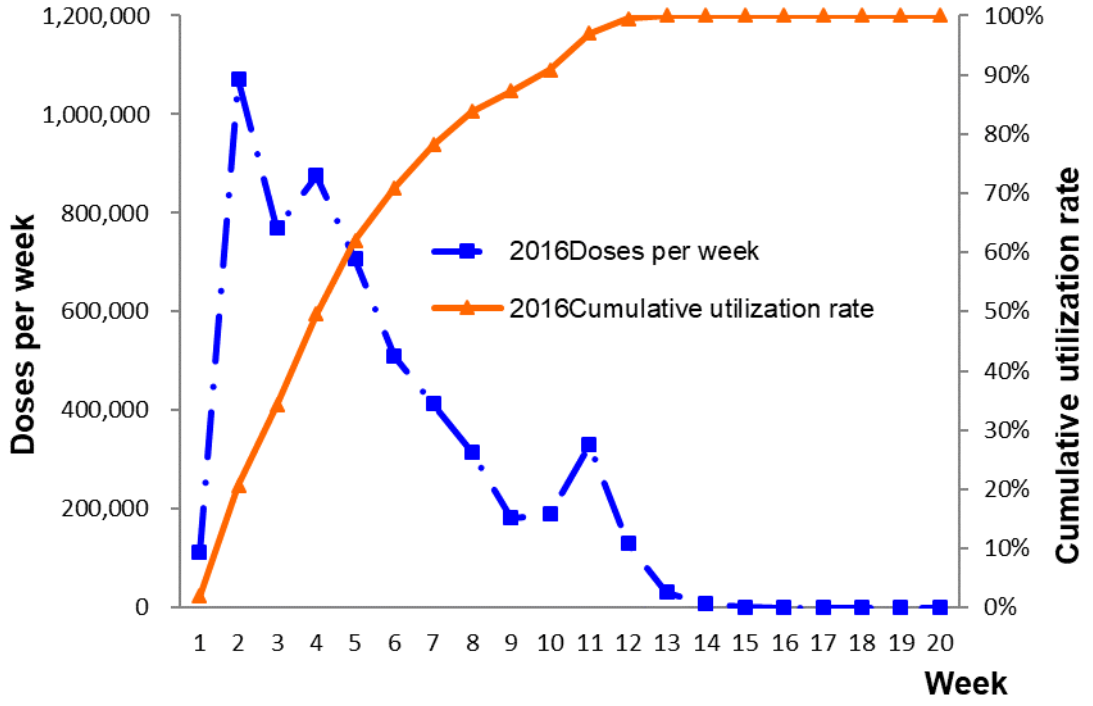

Figure 71 Immunization progress with 0.5ml influenza vaccine shots

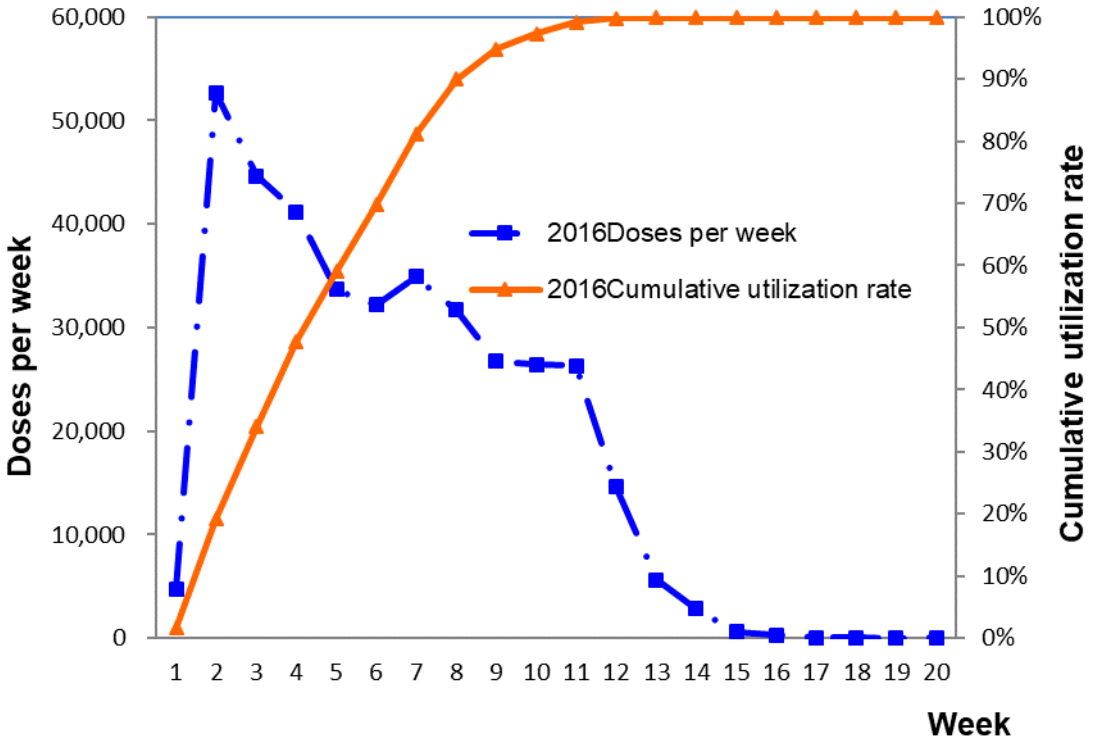

Figure 72 Immunization progress with 0.25ml influenza vaccine shots

Table 29 Government-funded influenza vaccination coverage rates by cities/counties, 2016-2017

Locality	Target population	Vaccinated population	Coverage rate
Taipei City	1,526,311	585,906	38.4%
New Taipei City	2,019,922	798,280	39.5%
Keelung City	200,735	85,254	42.5%
Yilan County	247,649	117,736	47.5%
Kinmen County	65,751	14,822	22.5%
Lienchiang County	6,585	3,304	50.2%
Taoyuan City	1,068,990	512,272	47.9%
Hsinchu City	227,372	107,822	47.4%
Hsinchu County	275,009	123,008	44.7%
Miaoli County	300,059	131,834	43.9%
Taichung City	1,408,982	642,373	45.6%
Changhua County	679,828	335,649	49.4%
Nantou County	278,861	131,604	47.2%
Yunlin County	384,210	171,376	44.6%
Chiayi City	153,043	83,486	54.6%
Chiayi County	281,349	128,365	45.6%
Tainan City	1,006,503	432,074	42.9%
Kaohsiung City	1,462,017	644,511	44.1%
Pingtung County	450,781	185,338	41.1%
Penghu County	52,534	21,926	41.7%
Hualien County	183,334	82,759	45.1%
Taitung County	120,559	52,547	43.6%
Total	12,400,384	5,392,246	43.5%

Note: 1. Data source: Influenza Vaccine Information System (IVIS)

2. The coverage rates were calculated by reports from the cities and counties.

3. People who were not eligible for the government-funded influenza vaccination program and the 2nd dose for children under 6 years old were not calculated.

4. Patients with catastrophic illness, people with medical conditions, pregnant and 6-months postpartum women and others were not calculated because the target population could not be estimated by cities/counties.

Syphilis

In 2017, 9,835 confirmed cases of syphilis (incidence rate: 41.75 per 100,000 population) were reported, which represented an increase compared to 8,725 confirmed cases (incidence rate: 37.10 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 8,222 male cases (83.6%) and 1,613 female cases (16.4%) with male to female ratio of 5.1:1.0.

(2) By age group (by age of diagnosis)

The cases occurred mostly in 25-39 years age group with 4,437 cases (45.1%) reported, followed by 40-64 years age group with 2,103 cases (21.4%), 65 years and over age group with 1,991 cases (20.2%), 15-24 years age group with 1,302 cases (13.2%), and 5-14 years age group with 2 cases (0.1%).

(3) By month (by date of diagnosis)

There were no specific prevalent months or seasons for syphilis in 2017, and there were confirmed cases reported in each month of the year.

(4) By residential region

New Taipei City had the highest number of incidents with 2,057 cases (20.9%) reported, followed by Taipei City with 1,452 cases (14.8%), Taichung City with 1,188 cases (12.1%), Kaohsiung City with 1,135 cases (11.5%), Taoyuan City with 1,120 cases (11.4%), Tainan City with 672 cases (6.8%), Changhua County with 327 cases (3.3%), Pingtung County with 312 cases (3.2%), Yilan County with 208 cases (2.1%), Keelung City with 197 cases (2.0%), Yunlin County with 163 cases (1.7%), Hualien County with 161 cases (1.6%), Nantou County with 142 cases (1.4%), Hsinchu County with 140 cases (1.4%), Hsinchu City with 138 cases (1.4%), Miaoli County with 118 cases (1.2%), and Chiayi County with 111 cases (1.1%). The other cities and counties had less than 100 confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Taipei City (53.99), followed by Keelung City (52.99) and Taoyuan City (51.66).

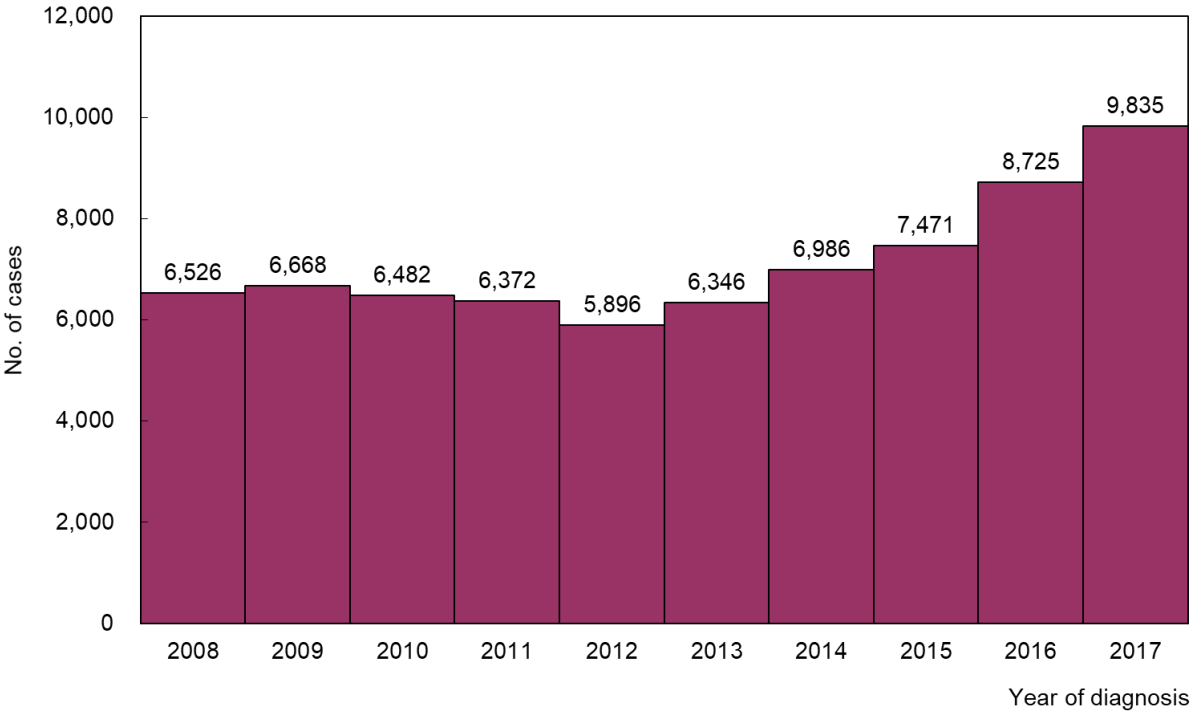

Figure 73 Number of confirmed syphilis cases, 2008-2017

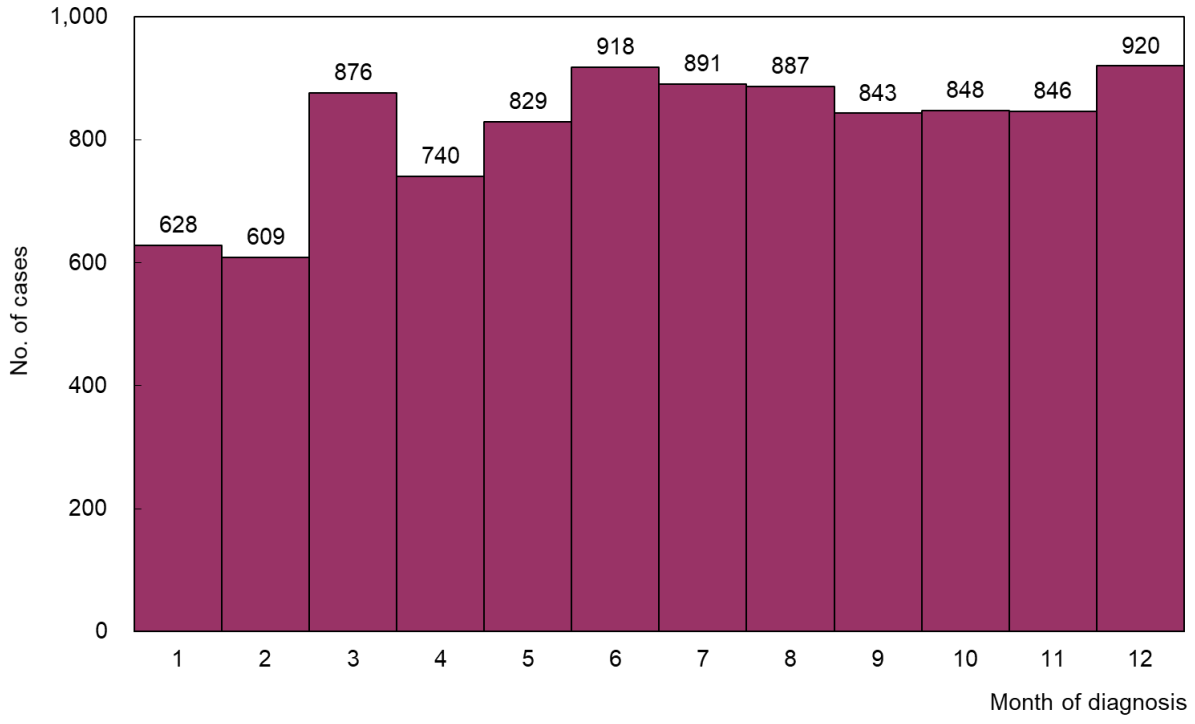

Figure 74 Number of confirmed syphilis cases, 2017

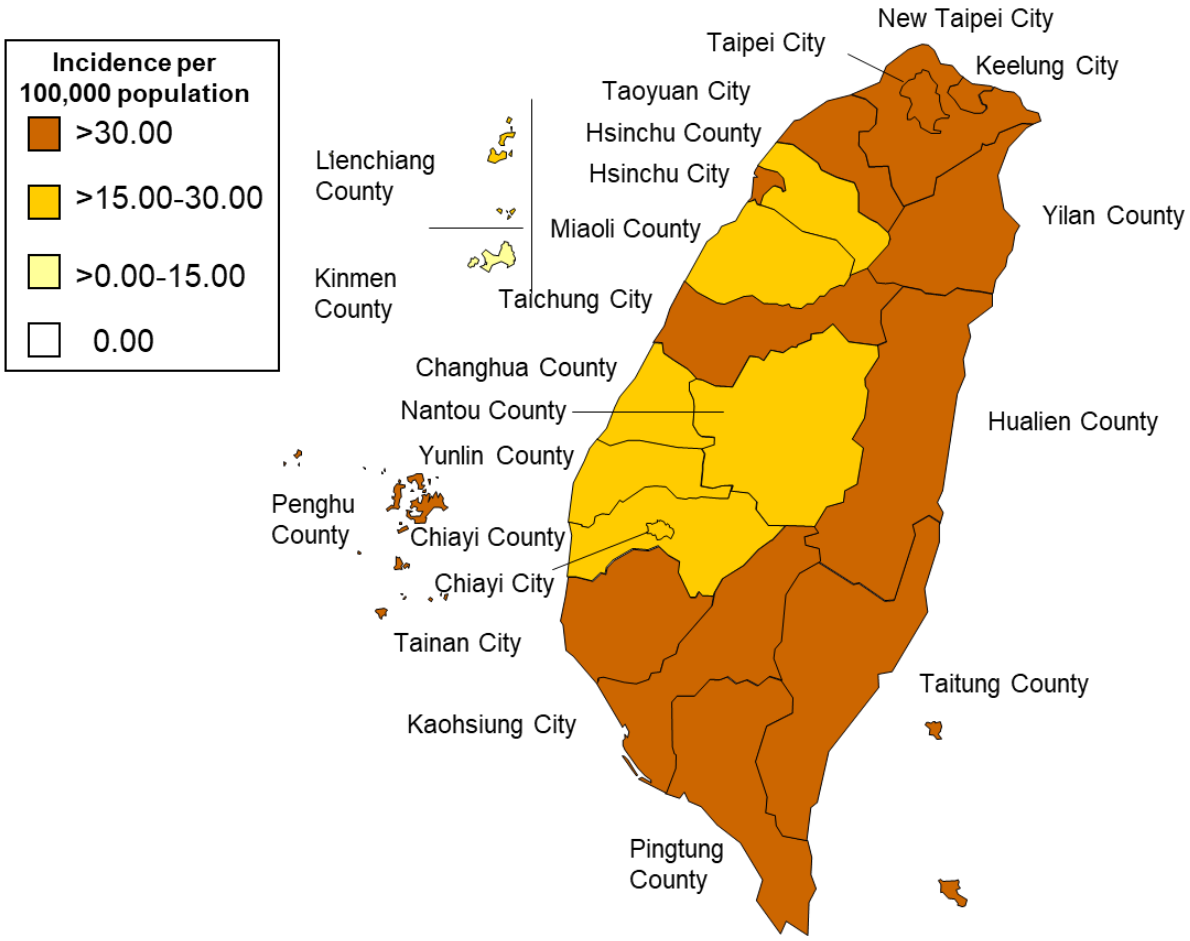

Figure 75 Geographical distribution by incidence of confirmed syphilis cases, 2017

Gonorrhea

In 2017, 4,601 confirmed cases of gonorrhea (incidence rate: 19.53 per 100,000 population) were reported, which represented an increase compared to 4,469 confirmed cases (incidence rate: 19.00 per 100,000 population) in 2016. The data of confirmed cases in 2017 are analyzed as follows:

(1) By gender

There were 4,235 male cases (92.0%) and 366 female cases (8.0%) with male to female ratio of 112.6:1.0.

(2) By age group (by age of diagnosis)

The cases occurred mostly in 25-39 years age group with 2,511 cases (54.6%) reported, followed by 15-24 years age group with 1,455 cases (31.6%), 40-64 years age group with 578 cases (12.6%), 65 years and over age group with 34 cases (0.7%), 5-14 years age group with 21 cases (0.5%), and 1-4 years age group with 2 cases (less than 0.1%).

(3) By month (by date of diagnosis)

There were no specific prevalent months or seasons for gonorrhea in 2017, and there were confirmed cases reported in each month of the year.

(4) By residential region

Except Lienchiang County, all other cities and counties had confirmed cases. New Taipei City had the highest number of incidents with 1,069 cases (23.2%) reported, followed by Taipei City with 788 cases (17.1%), Taoyuan City with 547 cases (11.9%), Kaohsiung City with 497 cases (10.8%), Taichung City with 350 cases (7.6%), Tainan City with 179 cases (3.9%), Hsinchu County with 169 cases (3.7%), Keelung City with 142 cases (3.1%), Nantou County with 129 cases (2.8%), Hualien County with 123 cases (2.7%), Changhua County with 107 cases (2.3%), Taitung County with 97 cases (2.1%), Miaoli County with 84 cases (1.8%), Pingtung County with 76 cases (1.7%), Hsinchu City with 70 cases (1.5%), and Yunlin County with 65 cases (1.4%). The other cities and counties had less than 50 confirmed cases.

The incidence rate of confirmed cases per 100,000 population was the highest in Taitung County (44.06), followed by Keelung City (38.19) and Hualien County (37.26).

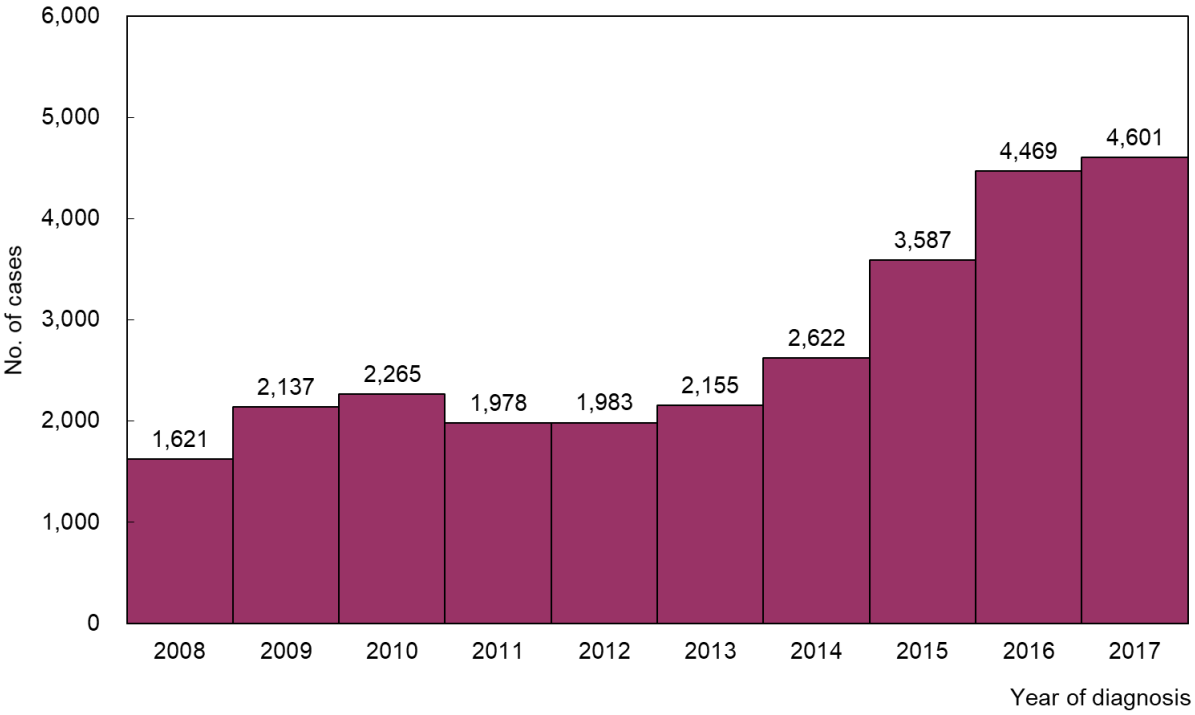

Figure 76 Number of confirmed gonorrhea cases, 2008-2017

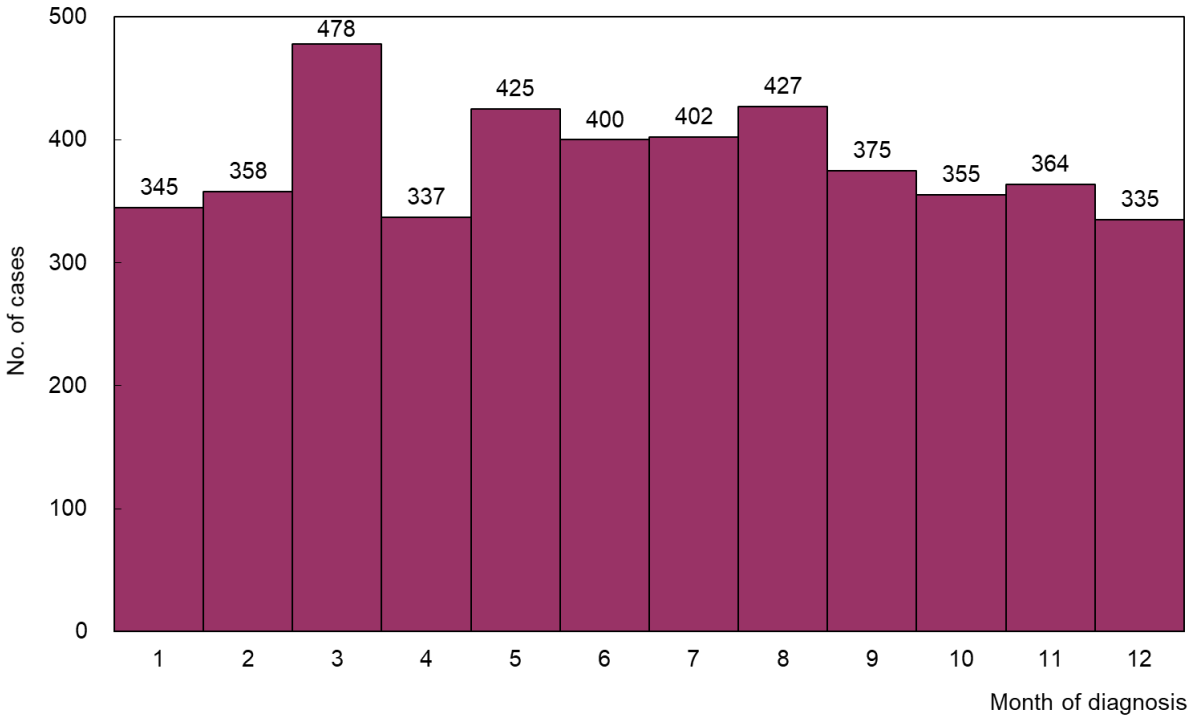

Figure 77 Number of confirmed gonorrhea cases, 2017

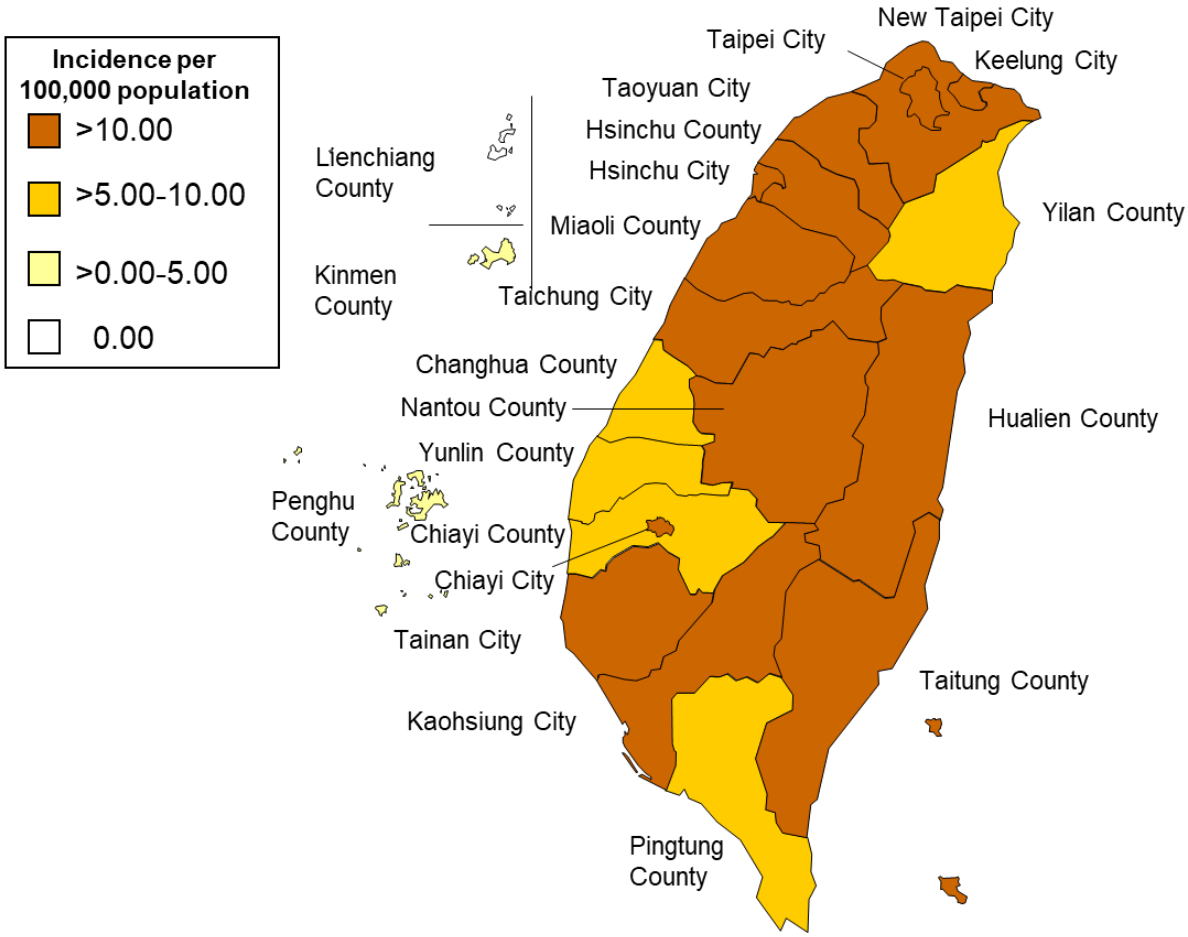

Figure 78 Geographical distribution by incidence of confirmed gonorrhea cases, 2017

HIV Infection & AIDS

From 1984 up to the end of 2017, there were 37,048 cases of human immunodeficiency virus (HIV) infection (35,930 native cases and 1,118 foreign cases) and 16,974 acquired immunodeficiency syndrome (AIDS) cases (16,809 native cases and 165 foreign cases) were reported.

In 2017, 2,581 HIV cases (2,514 native cases and 67 foreign cases) and 1,405 AIDS cases (1,390 native cases and 15 foreign cases) were diagnosed and reported. The data of native cases in 2017 are analyzed as follows (the HIV infection cases include those cases with AIDS at the time of reporting):

(1) By gender

HIV: There were 2,446 male cases (97.3%) and 68 female cases (2.7%) with male to female ratio of 36.0：1.0.

AIDS: There were 1,338 male cases (96.3%) and 52 female cases (3.7%) with male to female ratio of 25.7：1.0.

(2) By age group (by age of diagnosis)

HIV: There were 1,424 cases (56.6%) in 25-39 years age group, 664 cases (26.4%) in 15-24 years age group, and 395 cases (15.7%) in 40-64 years age group.

AIDS: There were 758 cases (54.5%) in 25-39 years age group, 407 cases (29.3%) in 40-64 years age group, and 197 cases (14.2%) in 15-24 years age group.

(3) By month (by date of diagnosis)

There were no specific prevalent months or seasons for HIV infection and AIDS in 2017 and there were confirmed cases reported in each month of the year.

(4) By risk factor

HIV (total): There were 2,148cases (85.4%) caused by men who have sex with men, 265 cases (10.5%) caused by heterosexual contact, 44 cases (1.8%) caused by injection drug use, 1 case (0.0%) caused by vertical transmission, and 56 cases (2.2%) with unknown causes.

HIV (male): There were 2,148 cases (87.8%) caused by men who have sex with men, 206 cases (8.4%) caused by heterosexual contact, 39 cases (1.6%) caused by injection drug use, 1 case (0.0%) caused by vertical transmission, and 52 cases (2.1%) with unknown causes.

HIV (female): The cases were mostly caused by heterosexual contact with 59 cases (86.8%), followed by injection drug use with 5 cases (7.4%) and unknown causes with 4 cases (5.9%).

AIDS (total): There were 1,018 cases (73.2%) involving men who have sex with men, 184 cases (13.2%) involving heterosexual contact, 161 cases (11.6%) involving injection drug use, 1 case (0.1%) involving vertical transmission. There were also 26 cases (1.9%) with unknown causes.

AIDS (male): There were 1,018 cases (76.1%) involving men who have sex with men, 151 cases (11.3%) involving heterosexual contact, 145 cases (10.8%) involving injection drug use, 1 case (0.1%) involving vertical transmission. There were also 23 cases (1.7%) with unknown causes.

AIDS (female): There were 33 cases (63.5%) involving heterosexual contact, 16 cases (30.8%) involving injection drug use, and 3 cases (5.8%) with unknown causes.

See Tables 30 and 31 and Figures 79 and 80 for statistics of HIV infection and AIDS by risk factor.

(5) By residential region

HIV: New Taipei City had the highest number of incidents with 587 cases (23.3%) reported, followed by Taipei City with 426 cases (16.9%), Taichung City with 318 cases (12.6%), Kaohsiung City with 296 cases (11.8%), and Taoyuan City with 252 cases (10.0%). Lienchiang County did not have HIV infection cases reported in 2017.

The incidence rate of confirmed HIV cases per 100,000 population was the highest in Taipei City (15.84), followed by New Taipei City (14.74) and Hualien County (12.12).

AIDS: New Taipei City had the highest number of incidents with 286 cases (20.6%) reported, followed by Taipei City with 185 cases (13.3%), Kaohsiung City with 183 cases (13.2%), Taichung City with 172 cases (12.4%) and Taoyuan City with 146 cases (10.5%). Kinmen County and Lienchiang County did not have AIDS cases reported in 2017.

The incidence rate of confirmed AIDS cases per 100,000 population was the highest in Keelung City (8.88), followed by Hualien County (7.57) and New Taipei City (7.18).

Table 30 Risk factors for male HIV and AIDS cases (foreigner excluded), 2017

Risk factor	HIV	%	AIDS	%
Men who have sex with men	2,148	87.8%	1,018	76.1%
Heterosexual contact	206	8.4%	151	11.3%
Injecting drug users	39	1.6%	145	10.8%
Recipient of blood/clotting factor	0	0.0%	0	0.0%
Vertical transmission	1	0.0%	1	0.1%
Unknown	52	2.1%	23	1.7%
Total	2,446	100.0%	1,338	100.0%

Table 31 Risk factors for female HIV and AIDS cases (foreigner excluded), 2017

Risk factor	HIV	%	AIDS	%
Heterosexual contact	59	86.8%	33	63.5%
Injecting drug users	5	7.4%	16	30.8%
Recipient of blood/clotting factor	0	0.0%	0	0.0%
Vertical transmission	0	0.0%	0	0.0%
Unknown	4	5.9%	3	5.8%
Total	68	100.0%	52	100.0%

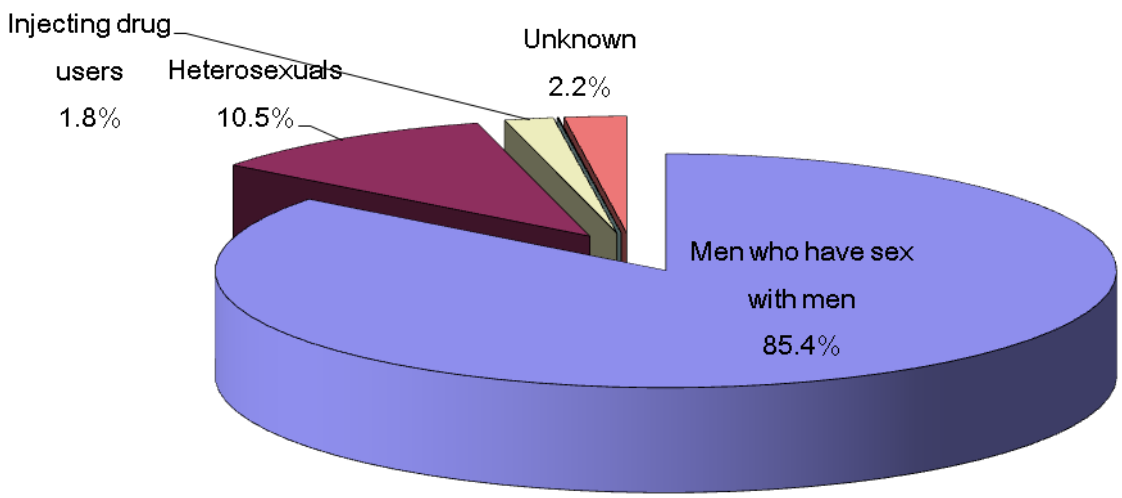

Figure 79 Risk factor of confirmed HIV infection cases (foreigner excluded), 2017

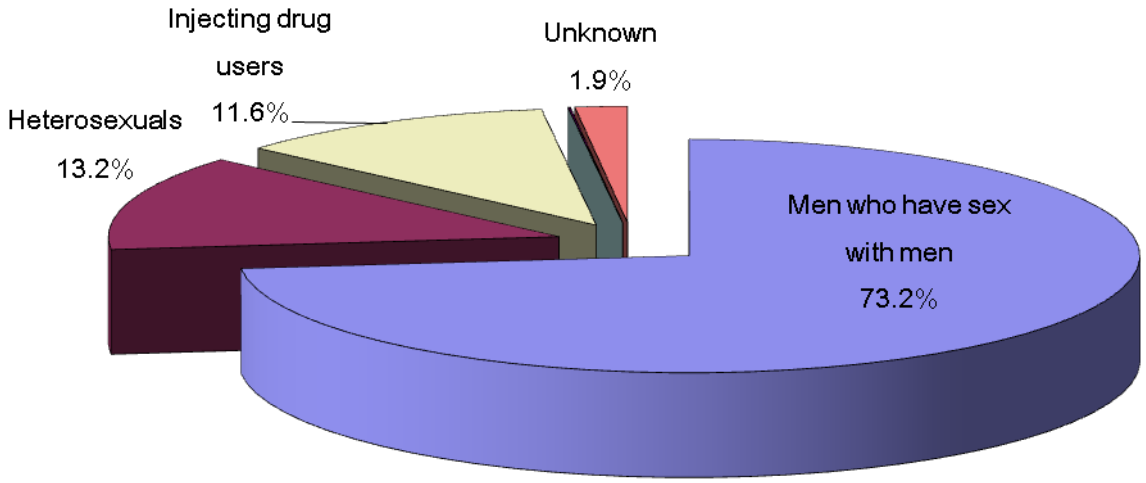

Figure 80 Risk factor of confirmed AIDS cases (foreigner excluded), 2017

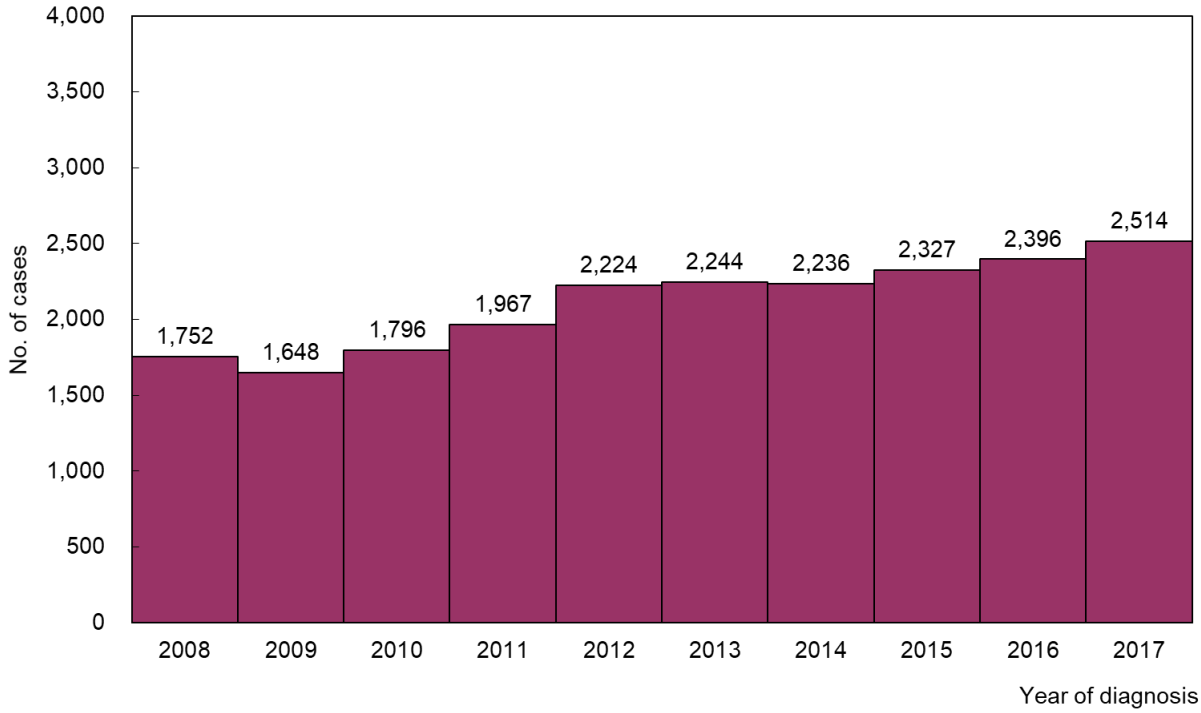

Figure 81 Number of confirmed HIV infection cases (foreigner excluded), 2008-2017

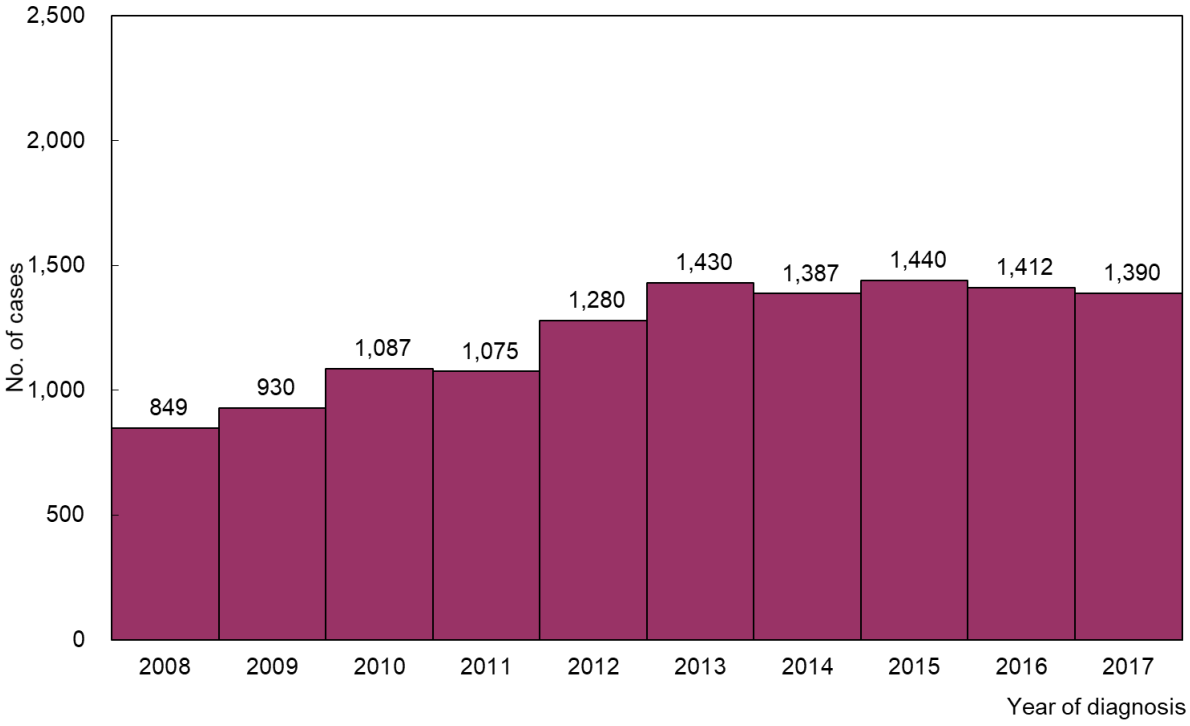

Figure 82 Number of confirmed AIDS cases (foreigner excluded), 2008-2017

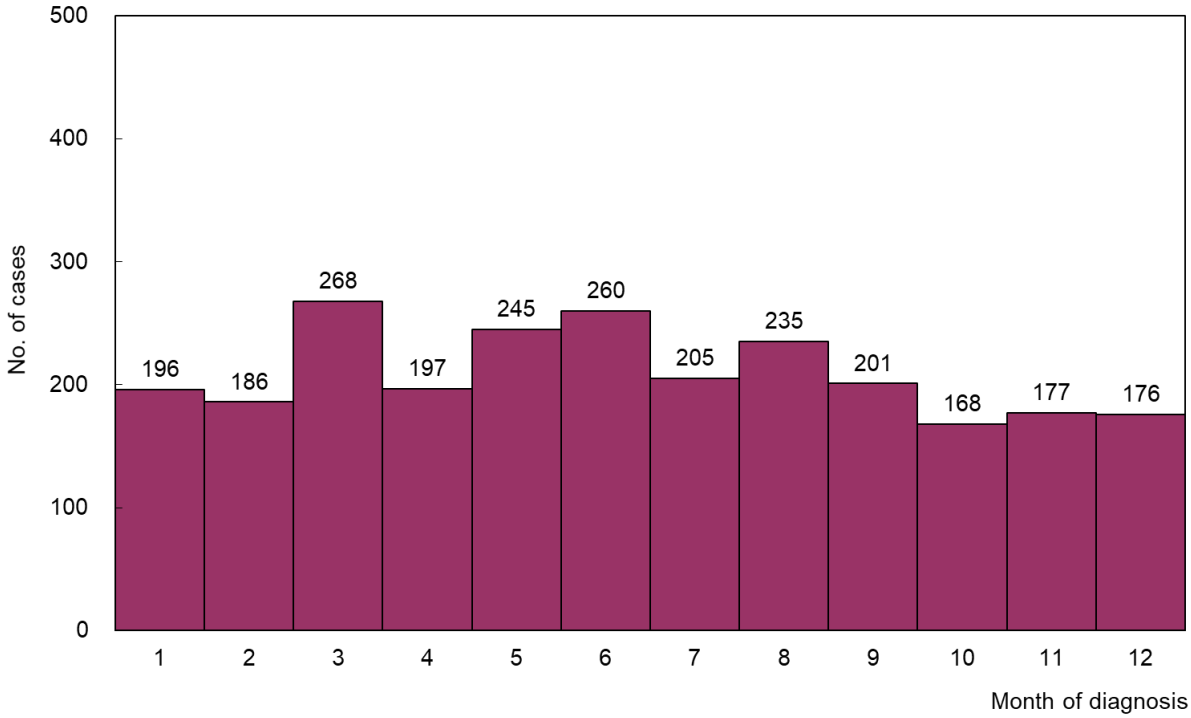

Figure 83 Number of confirmed HIV infection cases (foreigner excluded), 2017

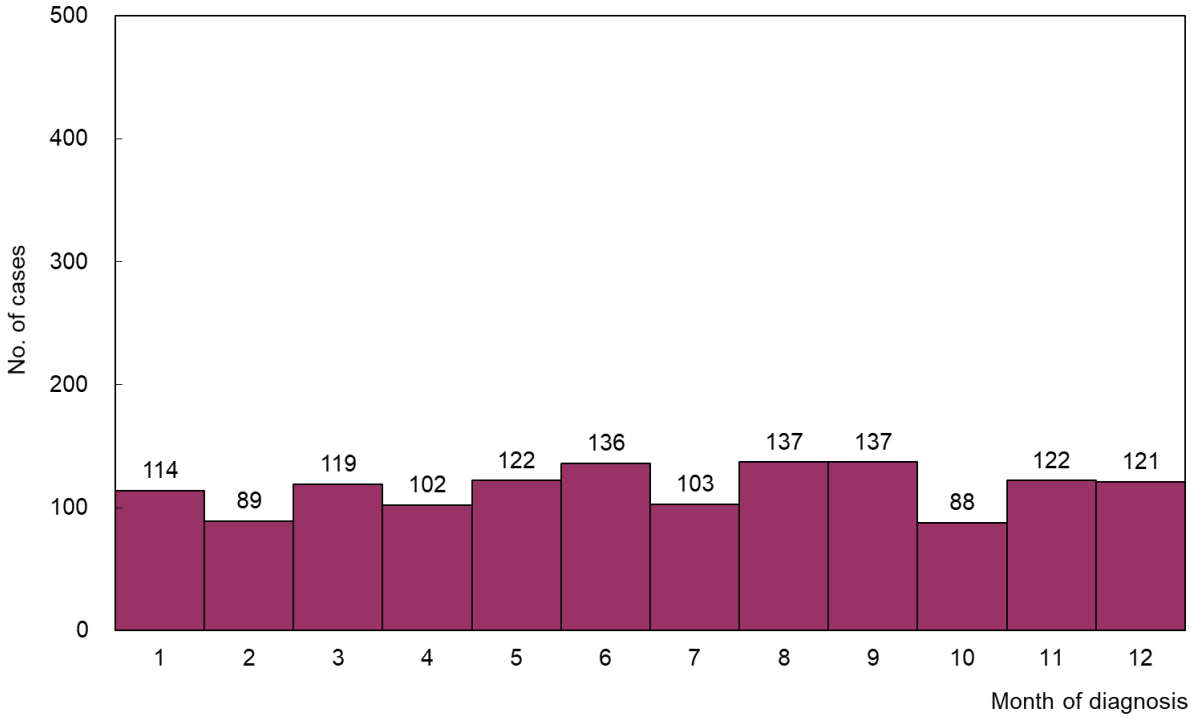

Figure 84 Number of confirmed AIDS cases (foreigner excluded), 2017

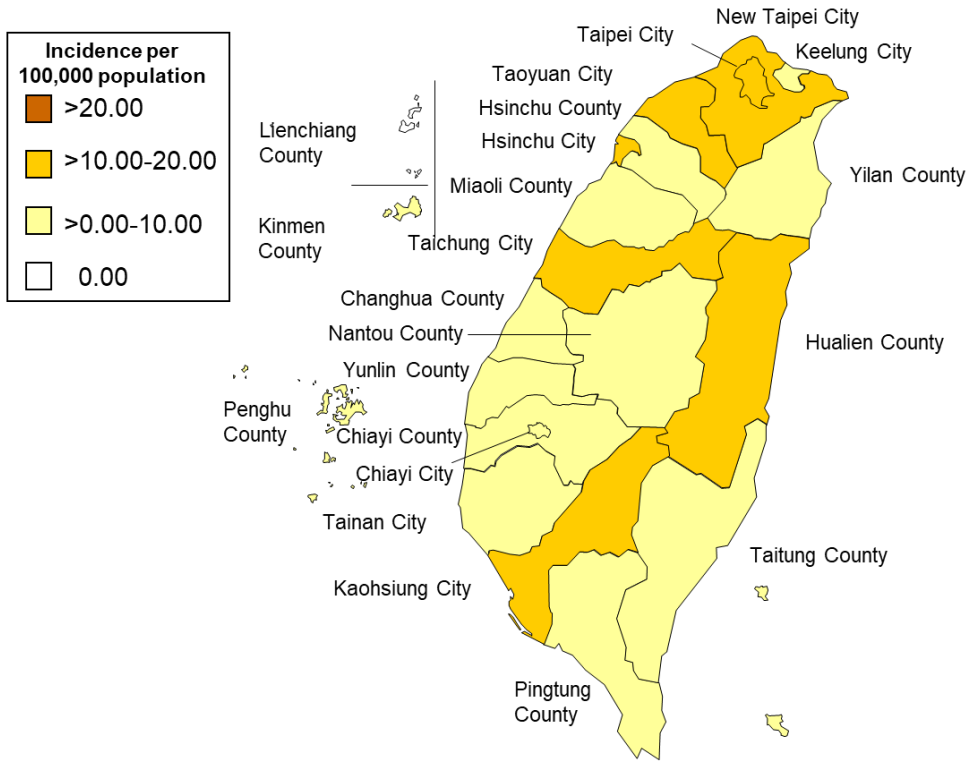

Figure 85 Geographical distribution by incidence of confirmed HIV infection cases (foreigner excluded), 2017

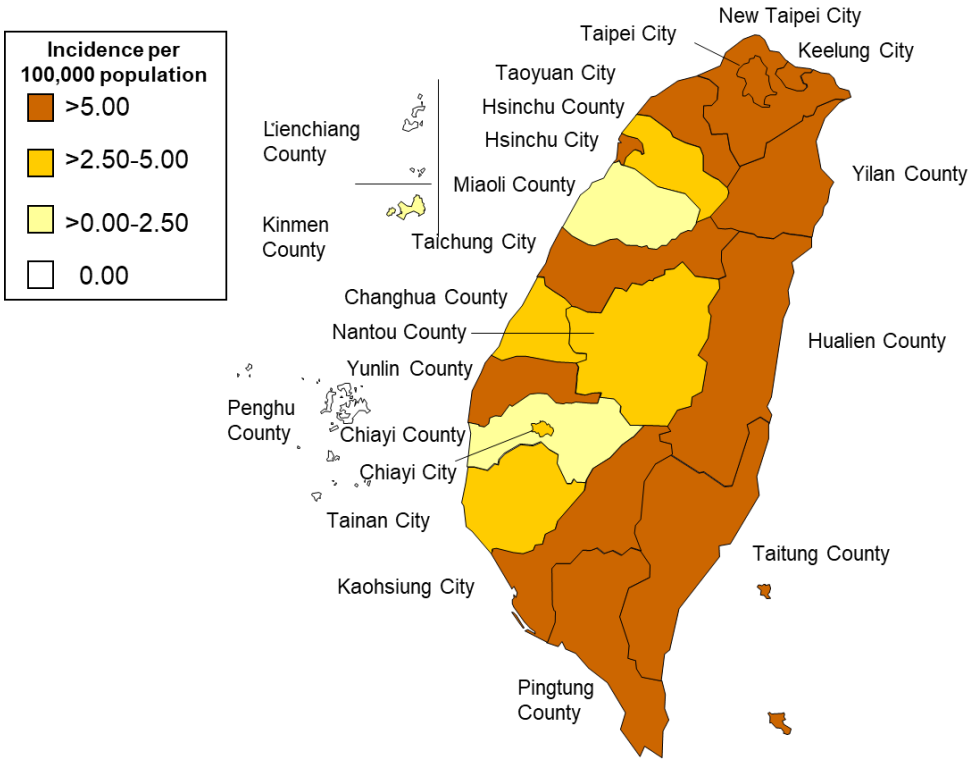

Figure 86 Geographical distribution by incidence of confirmed AIDS cases (foreigner excluded), 2017

Tuberculosis

In 2017, 9,759 cases of tuberculosis (incidence rate: 41.4 per 100,000 population) were confirmed, which went down in both case number and incidence rate with 5.5% and 5.7% declining respectively, as compared with 10,328 confirmed cases (incidence rate: 43.9 per 100,000 population) in 2016. The data of confirmed TB cases in 2017 were analyzed as follows:

(1) By gender

There were 6,688 male cases (68.5%) and 3,071 female cases (31.5%) with a male to female ratio of 2.2:1.0. The incidence rate of tuberculosis in males (57.1 per 100,000 population) was 2.2 times higher than that in females (25.9 per 100,000 population).

(2) By age group

The number of tuberculosis cases and incidence rate per 100,000 population rose significantly with age. Of the new TB cases in 2017, 49 were aged 0-14, 327 were aged 15-24, 424 were aged 25-34, 676 were aged 35-44, 1,093 were aged 45-54, 1,664 were aged 55-64, and 5,526 were elderly over 65 year-old which accounted for 56.6% of total.

(3) By month (based on notification date)

There were no specific prevalent months or seasons for tuberculosis notification in 2017 and there were confirmed cases reported in each month of the year, with highest number in August (973 reported) and lowest in February (711 reported).

(4) By residential region

The incidence rate of tuberculosis was higher in eastern region than in western region, and was higher in southern region than in northern region. With regard to incidence rate by city and county, Pingtung County had the highest incidence rate with 70.6 per 100,000 population, followed by Taitung County with 68.1 per 100,000 population. Lienchiang County and Kinmen County had the lowest incidence rate with 13.9 and 15.7 per 100,000 population respectively.

(5) Mortality distribution

In 2017, there were 511 tuberculosis deaths with a mortality rate of 2.2 per 100,000 population. Males accounted for 397 deaths (3.4 deaths per 100,000 population) and the rest of 114 were females (1.0 deaths per 100,000 population) with a male to female death ratio of 3.5:1.0.

The tuberculosis mortality rate in Taiwan increased with age. Of the 511

tuberculosis deaths in 2017, 83.2% (425 cases) were elderly aged 65 years and above.

For the overall geographic distribution, tuberculosis deaths in 2017 showed a pattern of higher in eastern and southern regions and lower in northern region. Lienchiang County had the highest TB mortality rate (7.9 per 100,000 population), followed by Taitung County (5.5 per 100,000 population).

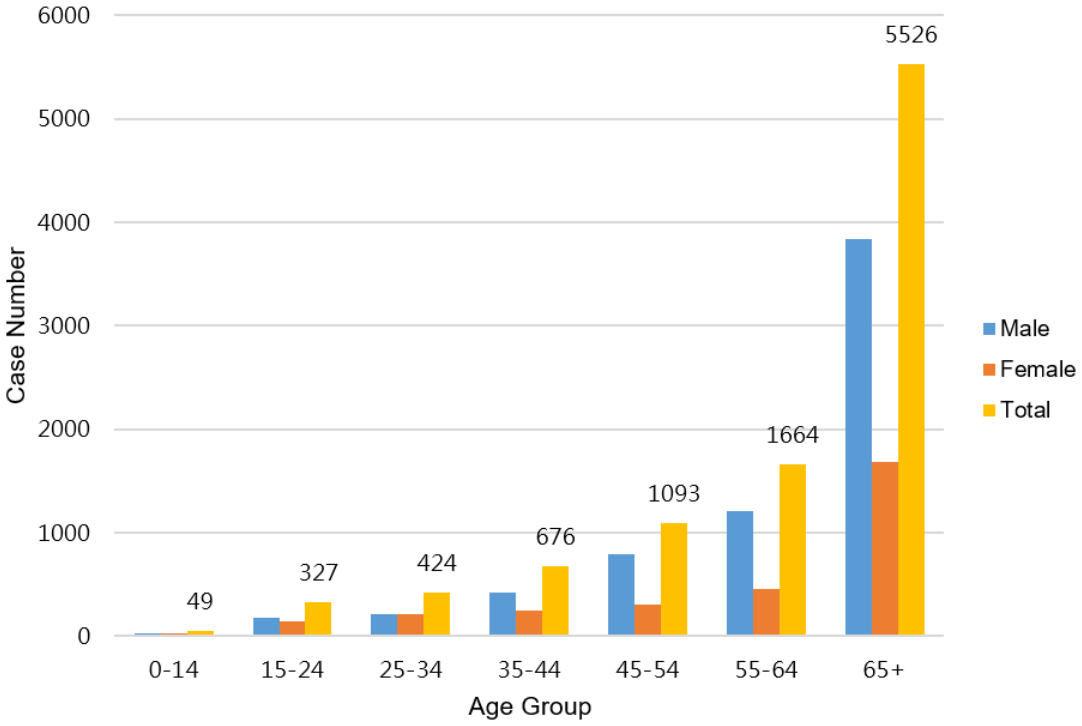

Figure 87 Tuberculosis cases number by age group and sex, 2017

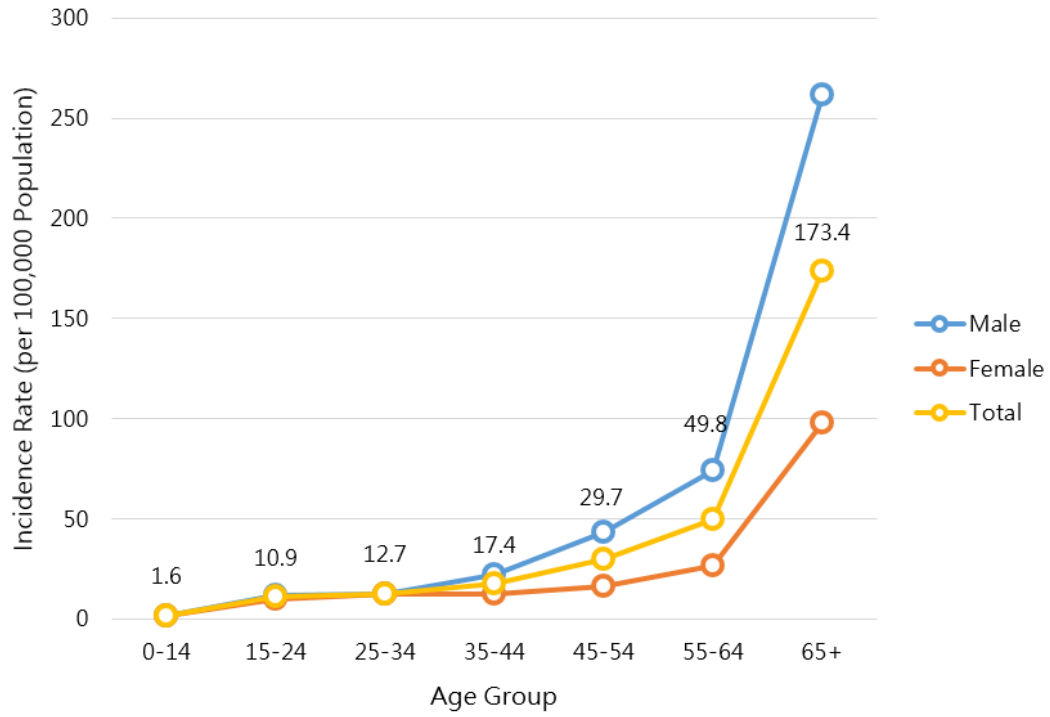

Figure 88 Incidence rate of tuberculosis by age group and sex, 2017

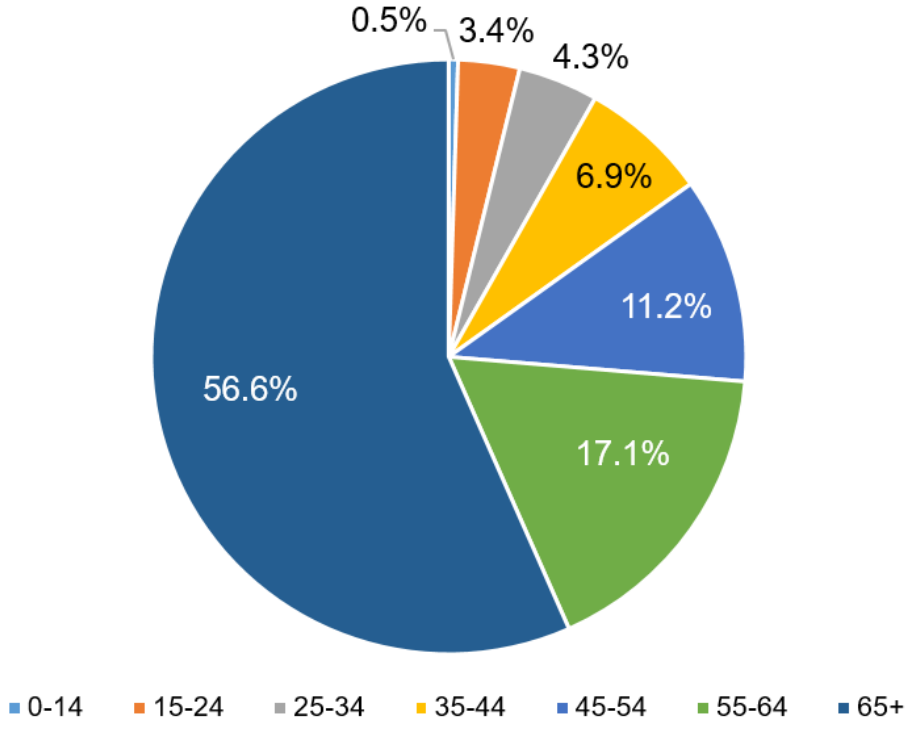

Figure 89 Distribution of tuberculosis incidence by age group, 2017

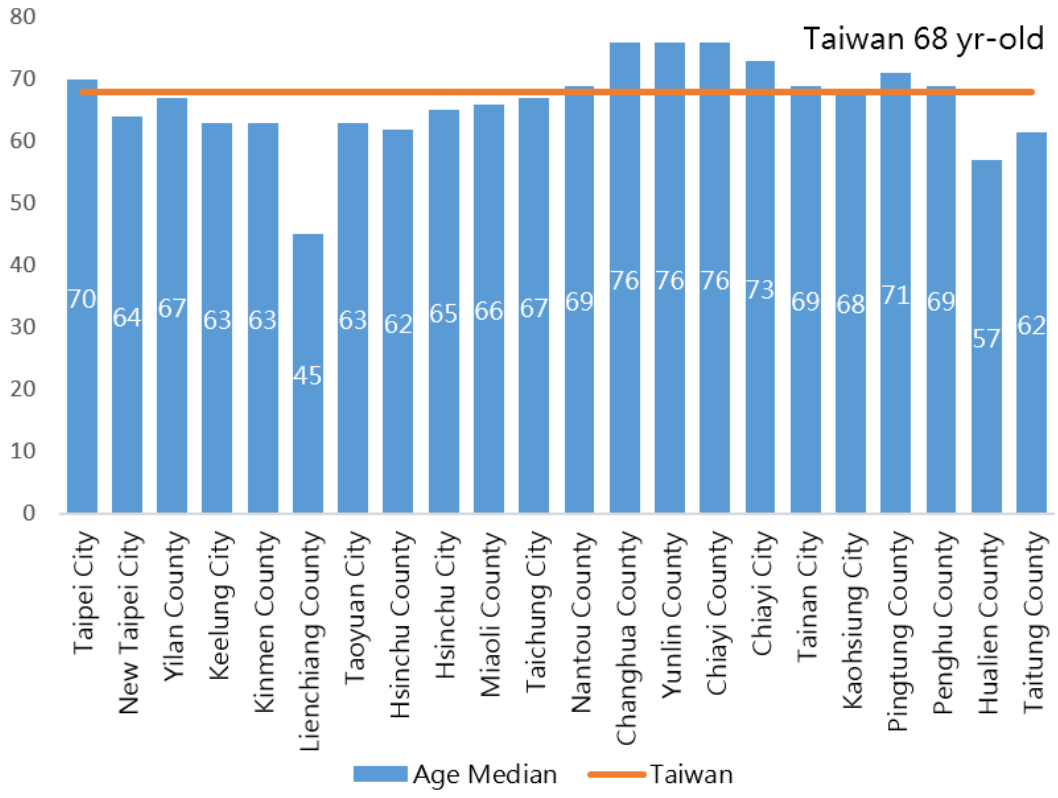

Figure 90 Tuberculosis Age Median by city and county, 2017

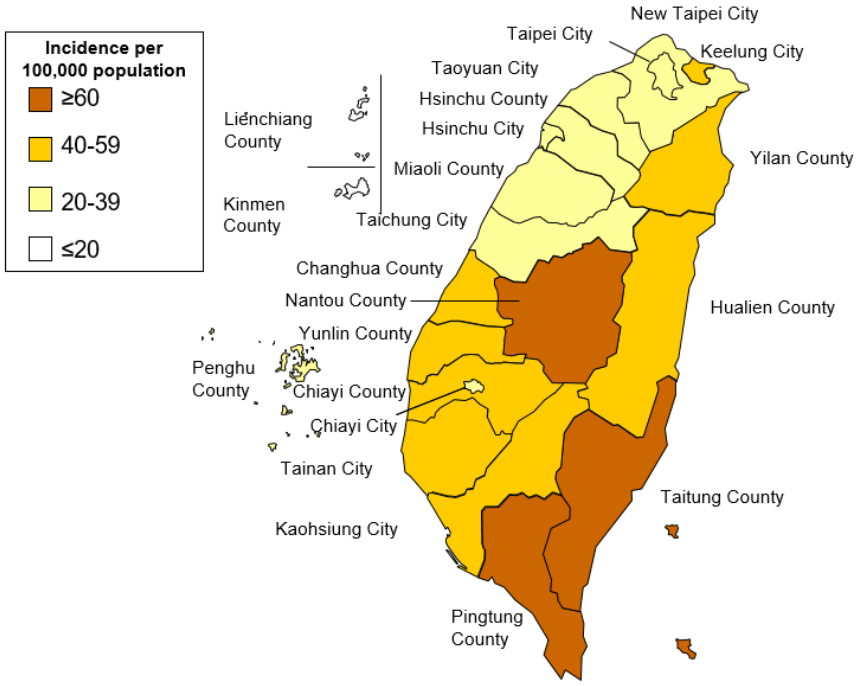

Figure 91 Geographical distribution by incidence of tuberculosis cases, 2017

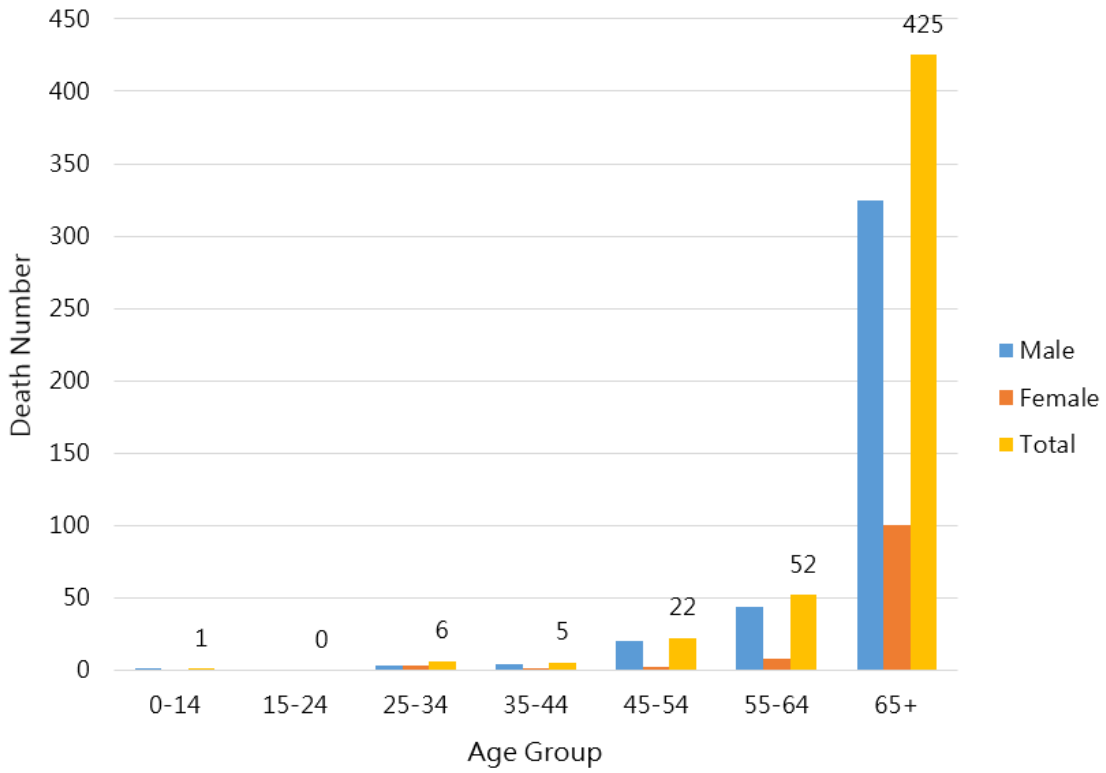

Figure 92 Mortality number of Tuberculosis by age group and sex, 2017

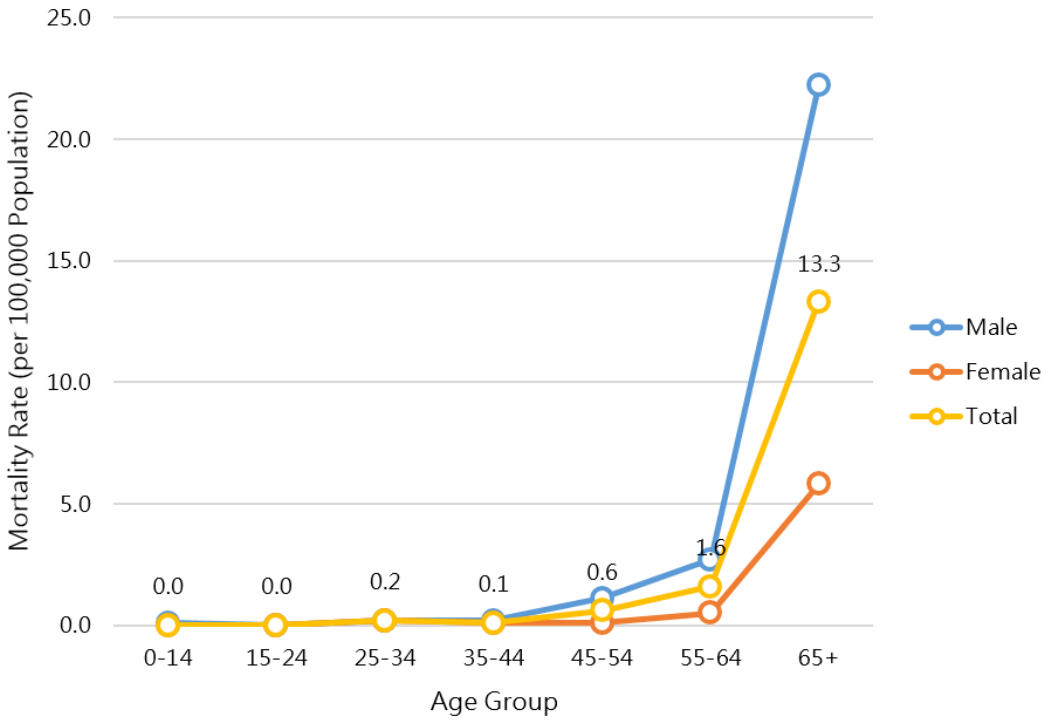

Figure 93 Mortality rate of tuberculosis by age group and sex, 2017

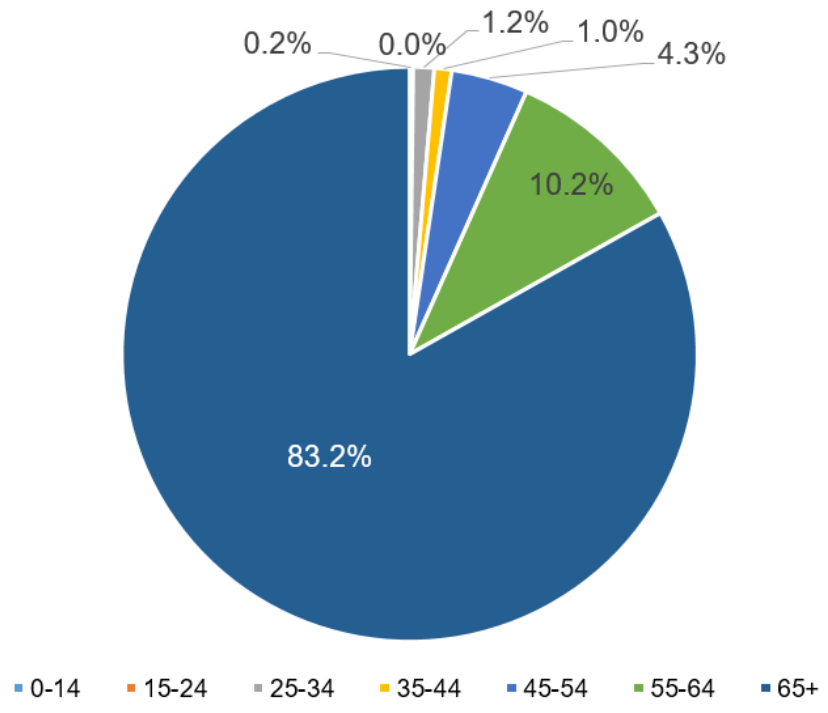

Figure 94 Distribution of tuberculosis mortality by age group, 2017

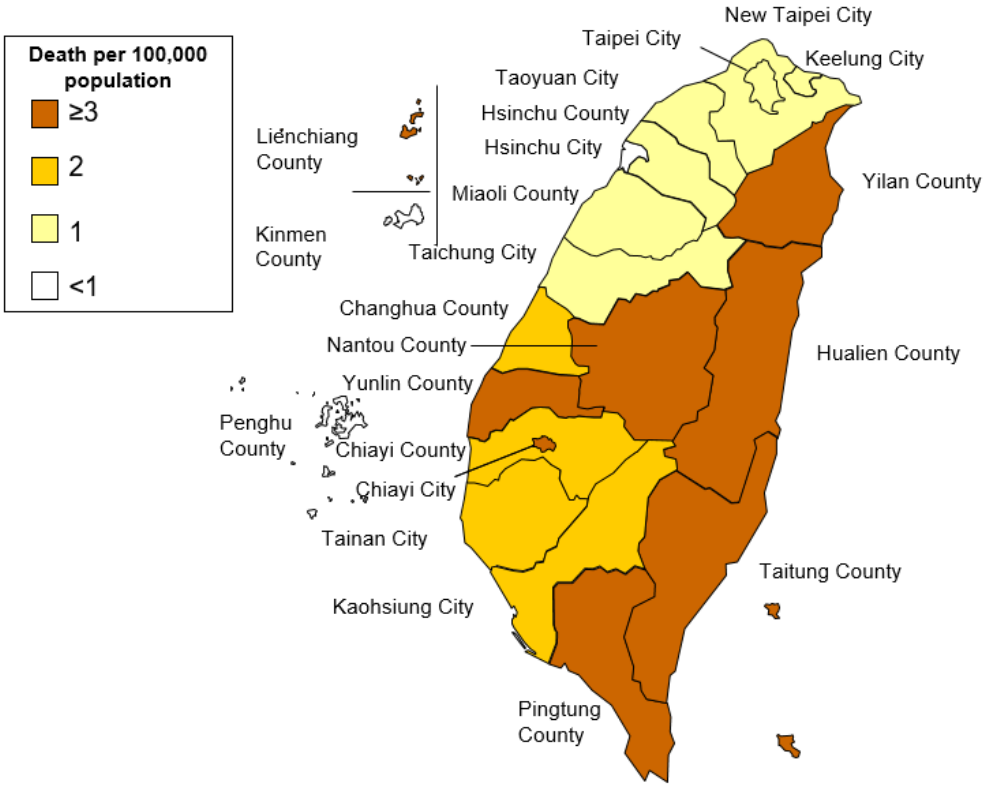

Figure 95 Geographical distribution by mortality of confirmed tuberculosis cases, 2017

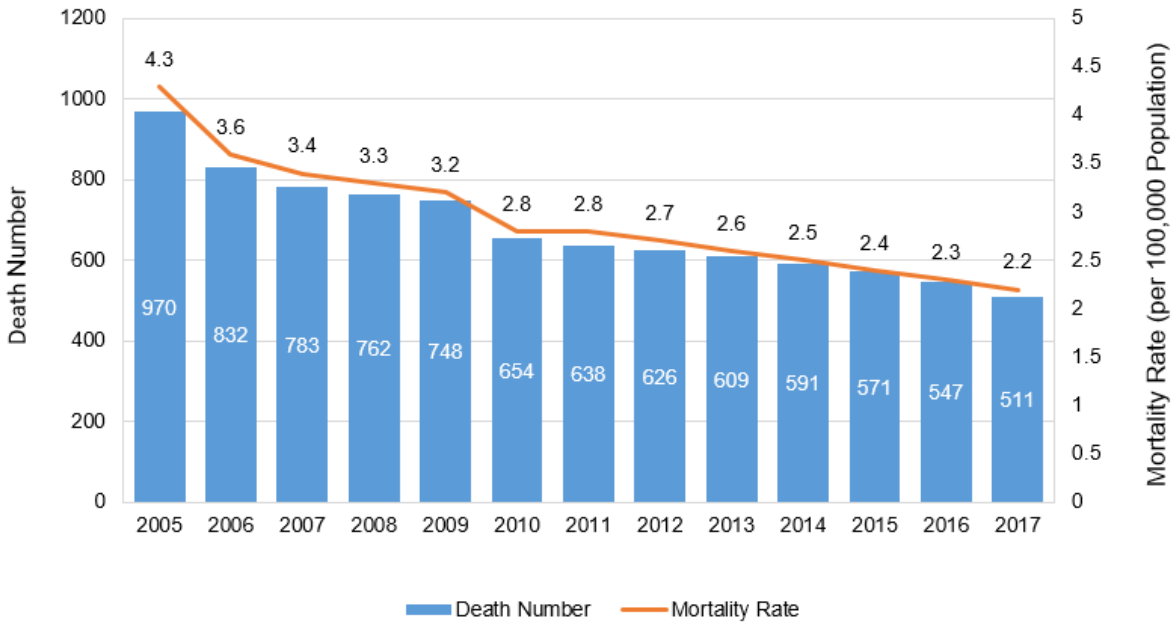

Figure 96 Trend of tuberculosis mortality rate by year, 2005-2017

Table 32 Confirmed tuberculosis cases — by geographical distribution, 2017

Locality	Total			Male			Female		
	Tuberculosis	Midyear population	Per 100,000 population	Tuberculosis	Midyear population	Per 100,000 population	Tuberculosis	Midyear population	Per 100,000 population
Taiwan	9,759	23,555,522	41.4	6,688	11,719,425	57.1	3,071	11,836,097	25.9
Taipei City	797	2,689,481	29.6	511	1,285,714	39.7	286	1,403,767	20.4
New Taipei City	1,530	3,982,949	38.4	1,019	1,952,869	52.2	511	2,030,080	25.2
Keelung City	156	371,779	42.0	112	186,197	60.2	44	185,582	23.7
Yilan County	199	457,073	43.5	148	231,349	64.0	51	225,724	22.6
Kinmen County	19	136,285	13.9	18	68,147	26.4	1	68,138	1.5
Lienchiang County	2	12,738	15.7	1	7,264	13.8	1	5,474	18.3
Taoyuan City	686	2,167,890	31.6	459	1,080,592	42.5	227	1,087,298	20.9
Hsinchu City	122	439,235	27.8	87	217,019	40.1	35	222,216	15.8
Hsinchu County	170	549,825	30.9	117	281,052	41.6	53	268,773	19.7
Miaoli County	161	556,498	28.9	119	287,157	41.4	42	269,341	15.6
Taichung City	932	2,777,155	33.6	610	1,370,199	44.5	322	1,406,956	22.9
Changhua County	617	1,284,802	48.0	422	655,198	64.4	195	629,604	31.0
Nantou County	303	503,107	60.2	198	257,861	76.8	105	245,246	42.8
Yunlin County	415	692,623	59.9	286	359,580	79.5	129	333,044	38.7
Chiayi City	94	269,636	34.9	66	131,192	50.3	28	138,444	20.2
Chiayi County	241	513,251	47.0	183	266,996	68.5	58	246,255	23.6
Tainan City	863	1,886,278	45.8	604	942,680	64.1	259	943,598	27.4
Kaohsiung City	1,507	2,778,142	54.2	1,049	1,377,279	76.2	458	1,400,863	32.7
Pingtung County	588	832,866	70.6	409	426,117	96.0	179	406,749	44.0
Penghu County	27	103,668	26.0	24	53,400	44.9	3	50,268	6.0
Hualien County	180	330,074	54.5	137	167,777	81.7	43	162,297	26.5
Taitung County	150	220,171	68.1	109	113,792	95.8	41	106,380	38.5

Table 33 Confirmed tuberculosis cases — by age & sex, 2017

Age	Total			Male			Female		
	tuberculosis	Midyear population	Per 100,000 population	tuberculosis	Midyear population	Per 100,000 population	tuberculosis	Midyear population	Per 100,000 population
Total	9,759	23,555,522	41.4	6,688	11,719,425	57.1	3,071	11,836,097	25.9
0-4	16	1,042,731	1.5	9	540,185	1.7	7	502,546	1.4
5-9	16	986,849	1.6	9	513,631	1.8	7	473,218	1.5
10-14	17	1,087,297	1.6	8	568,696	1.4	9	518,601	1.7
15-19	129	1,396,424	9.2	69	727,594	9.5	60	668,830	9.0
20-24	198	1,609,847	12.3	115	835,196	13.8	83	774,651	10.7
25-29	201	1,607,123	12.5	98	833,316	11.8	103	773,807	13.3
30-34	223	1,740,501	12.8	118	874,175	13.5	105	866,326	12.1
35-39	324	2,031,356	15.9	200	1,004,884	19.9	124	1,026,472	12.1
40-44	352	1,848,922	19.0	227	910,451	24.9	125	938,471	13.3
45-49	439	1,818,069	24.1	312	898,479	34.7	127	919,590	13.8
50-54	654	1,856,650	35.2	477	917,041	52.0	177	939,609	18.8
55-59	804	1,774,754	45.3	591	869,945	67.9	213	904,809	23.5
60-64	860	1,567,940	54.8	616	758,779	81.2	244	809,161	30.2
65+	5,526	3,187,059	173.4	3,839	1,467,053	261.7	1,687	1,720,006	98.1

Table 34 Confirmed tuberculosis cases — by aboriginal locality / township, 2017

Locality	Township	Tuberculosis	Midyear population	Per 100,000 population
Total		245	200,724	122.1
New Taipei City	Wulai District	6	6,265	95.8
Yilan County	Nanao Township	10	5,919	168.9
Yilan County	Datong Township	6	6,093	98.5
Taoyuan City	Fusing District	12	11,349	105.7
Hsinchu County	Jianshih Township	3	9,477	31.7
Hsinchu County	Wufong Township	7	4,561	153.5
Miaoli County	Taian Township	9	5,907	152.4
Taichung City	Heping District	8	10,872	73.6
Nantou County	Renai Township	43	15,728	273.4
Nantou County	Sinyi Township	18	16,317	110.3
Chiayi County	Alishan Township	1	5,647	17.7
Kaohsiung City	Maolin District	4	1,910	209.4
Kaohsiung City	Taoyuan District	5	4,233	118.1
Kaohsiung City	Namasia District	2	3,128	63.9
Pingtung County	Sandimen Township	7	7,653	91.5
Pingtung County	Shihzih Township	2	4,817	41.5
Pingtung County	Majia Township	11	6,760	162.7
Pingtung County	Laiyi Township	8	7,480	107.0
Pingtung County	Chunrih Township	7	4,861	144.0
Pingtung County	Taiwu Township	4	5,266	76.0
Pingtung County	Mudan Township	3	4,889	61.4
Pingtung County	Wutai Township	3	3,265	91.9
Hualien County	Sioulin Township	28	15,843	176.7
Hualien County	Wanrong Township	11	6,411	171.6
Hualien County	Jhuosi Township	4	6,050	66.1
Taitung County	Yanping Township	8	3,537	226.2
Taitung County	Haiduan Township	7	4,252	164.6
Taitung County	Jinfong Township	5	3,633	137.6
Taitung County	Daren Township	1	3,521	28.4
Taitung County	Lanyu Township	2	5,080	39.4

Table 35 Mortality of Tuberculosis — by geographical distribution, 2017

Locality	Number of Death	Midyear population	Per 100,000 population
Taiwan	511	23,555,522	2.2
Taipei City	41	2,689,481	1.5
New Taipei City	68	3,982,949	1.7
Keelung City	7	371,779	1.9
Yilan County	15	457,073	3.3
Kinmen County	0	136,285	0.0
Lienchiang County	1	12,738	7.9
Taoyuan City	38	2,167,890	1.8
Hsinchu City	2	439,235	0.5
Hsinchu County	8	549,825	1.5
Miaoli County	8	556,498	1.4
Taichung City	30	2,777,155	1.1
Nantou County	15	503,107	3.0
Changhua County	32	1,284,802	2.5
Yunlin County	23	692,623	3.3
Chiayi City	8	269,636	3.0
Chiayi County	15	513,251	2.9
Tainan City	55	1,886,278	2.9
Kaohsiung City	81	2,778,142	2.9
Pingtung County	41	832,866	4.9
Penghu County	0	103,668	0.0
Hualien County	11	330,074	3.3
Taitung County	12	220,171	5.5

Table 36 Mortality of Tuberculosis — by age & sex, 2017

Age	Total			Male			Female		
	Death	Midyear population	Per 100,000 population	Death	Midyear population	Per 100,000 population	Death	Midyear population	Per 100,000 population
Total	511	23,555,522	2.2	397	11,719,425	3.4	114	11,836,097	1.0
0-4	1	1,042,731	0.1	1	540,185	0.2	-	502,546	0.0
5-9	-	986,849	-	-	513,631	-	-	473,218	-
10-14	-	1,087,297	-	-	568,696	-	-	518,601	-
15-19	-	1,396,424	-	-	727,594	-	-	668,830	-
20-24	-	1,609,847	-	-	835,196	-	-	774,651	-
25-29	2	1,607,123	0.1	1	833,316	0.1	1	773,807	0.1
30-34	4	1,740,501	0.2	2	874,175	0.2	2	866,326	0.2
35-39	1	2,031,356	0.0	1	1,004,884	0.1	-	1,026,472	-
40-44	4	1,848,922	0.2	3	910,451	0.3	1	938,471	0.1
45-49	8	1,818,069	0.4	7	898,479	0.8	1	919,590	0.1
50-54	14	1,856,650	0.8	13	917,041	1.4	1	939,609	0.1
55-59	17	1,774,754	1.0	14	869,945	1.6	3	904,809	0.3
60-64	35	1,567,940	2.2	30	758,779	4.0	5	809,161	0.6
65+	425	3,187,059	13.3	325	1,467,053	22.2	100	1,720,006	5.8

PART IV

Appendix

Appendix 1

Regulations for notifiable disease

Category	Diseases	Reported Within	Mandatory Isolation	Legal Basis*
I	Smallpox, Plague, Severe Acute Respiratory Syndrome, Rabies	24 hours	Isolation care at designated isolation care institution	1、2、6、11、16
II	Diphtheria, Typhoid Fever, Dengue Fever, Meningococcal Meningitis, Paratyphoid Fever, Poliomyelitis (AFP), Shigellosis, Amoebiasis, Malaria, Measles, Acute Hepatitis A, Enterohaemorrhagic E. coli Infection, Hantavirus Syndrome, Cholera, Rubella, Multidrug-Resistant Tuberculosis, Chikungunya Fever, West Nile Fever, Epidemic Typhus Fever, Anthrax	24 hours	When necessary, patients may be placed in designated isolation care institutions for isolation care.	1、2、11、19
III	Pertussis, Tetanus, Neonatal Tetanus, Japanese Encephalitis, Tuberculosis (except MDR TB),Congenital Rubella Syndrome, Acute Hepatitis B, Acute Hepatitis C, Acute Hepatitis D, Acute Hepatitis E, Acute Hepatitis (unspecified), Mumps, Legionellosis, Invasive *Haemophilus Influenzae* Type b Infection, Syphilis, Gonorrhea, Enteroviruses Infection with Severe Complications, Hansens's disease, Congenital Syphilis	one week	When necessary, patients may be placed in designated isolation care institutions for isolation care.	1、2、4、5、22
	HIV Infection, AIDS	24 hours		3、5
IV	Herpesvirus B Infection, Leptospirosis, Melioidosis, Botulism	24 hours	When necessary, patients may be placed in designated isolation care institutions for isolation care.	1、2、6、7、8、9、14、15、17
	Invasive Pneumococcal Disease, Q Fever, Endemic Typhus Fever, Lyme Disease, Tularemia, Scrub Typhus, Complicated varicella, Toxoplasmosis, Severe Complicated Influenza, Brucellosis	one week		
	Creutzfeldt-Jakob Disease	one month		
V	Rift Valley Fever, Marburg Haemorrhagic Fever, Yellow Fever, Ebola Virus Disease, Lassa Fever	24 hours	Isolation care at designated isolation care institution	1、2、10、12、13、14、16、18、20、21
	Middle East Respiratory Syndrome Coronavirus Infections, Novel Influenza A Virus infections		When necessary, patients may be placed in designated isolation care institutions for isolation care.	
	Zika virus infection		As the symptoms continue, patients should take precautions against mosquito bites.	

*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.The "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 9, 2011, Class IV Notifiable Communicable Disease "Severe Complicated Influenza" is changed name to "Complicated Influenza."
9. According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1010100098 dated February 7, 2012 of the Department of Health, "Brucellosis" is included in the list of Class IV Notifiable Communicable Diseases and the reporting deadline, reporting and relevant control measures for the diseases should be handled accordingly.
10. According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1010101167 dated October 3, 2012 of the Department of Health, "Severe Acute Respiratory Infections associated with Novel Coronavirus" is included in the list of Class V Notifiable Communicable Diseases.
11. According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1020100062 dated January 24, 2013 of the Department of Health, "Anthrax" is changed from the list of Class I Notifiable Communicable Diseases to Class II.
12. According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1020100343 dated March 14, 2013 of the Department of Health, "Severe Acute Respiratory Infections associated with Novel Coronavirus" is changed name to "Novel Coronavirus Infections" in the list of Class V Notifiable Communicable Disease.
13. According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1020100463 dated April 3, 2013 of the Department of Health, "H7N9 Influenza" is included in the list of Class V Notifiable Communicable Diseases.
14. According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1020100731 dated June 7, 2013 of the Department of Health, "Novel Coronavirus Infection" is changed name to "Middle East Respiratory Syndrome Coronavirus Infections" in the list of Class V Notifiable Communicable Disease. "Cat-Scratch Disease" and "NDM-1 Enterobacteriaceae" are removed from the list of Class IV Notifiable Communicable Disease.
15. According to Department of Health's Bulletin No. Bu-Shou-Ji-Zi-1020103975 dated December 27, 2013 of the Department of Health, "Varicella" is changed name to "Complicated varicella" in the list of Class IV Notifiable Communicable Disease.
16. According to Department of Health's Bulletin No. Bu-Shou-Ji-Zi-10301009927 dated June 27, 2014 of the Department of Health, "Novel Influenza A Virus infections" is included in the list of Class V Notifiable Communicable Diseases. "H5N1 Influenza" in the list of Class I Notifiable Communicable Disease and "H7N9 Influenza" in the list of Class V are removed.
17. According to Department of Health's Bulletin No. Bu-Shou-Ji-Zi-1030101132 dated Augest 1, 2014 of the Department of Health, "Complicated Influenza" is changed name to "Severe Complicated Influenza" in the list of Class IV Notifiable Communicable Disease.
18. According to Department of Health's Bulletin No. Bu-Shou-Ji-Zi-1030101208 dated Augest 8, 2014 of the Department of Health, "Ebola Haemorrhagic Fever" is changed name to "Ebola Virus Disease" in the list of Class V Notifiable Communicable Disease.
19. According to the announcement of the Ministry of Health and Welfare, Bu-So-Ji-Zi No.1040200233 on March 23, 2015, removed "dengue hemorrhagic fever/ dengue shock syndrome" from Category II Communicable Diseases.
20. According to the announcement of the Ministry of Health and Welfare, Bu-So-Ji-Zi No.1050100083 on January 22, 2016, included "zika virus infection" in Category II Communicable Diseases.
21. According to the announcement of the Ministry of Health and Welfare, Bu-So-Ji-Zi No.1050100179 on February 2, 2016, changed "zika virus infection" from Category II Notifiable Communicable Diseases to Category V.
22. According to the announcement of the Ministry of Health and Welfare, Bu-So-Ji-Zi No.1050100423 on Apr 1, 2016, included "congenital syphilis" in Category 3 Communicable Diseases.

Appendix 2

Reply Letter

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

Please protect patient's privacy

2016/04/01

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

I. The Patient

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

II. Medical Record and Date

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

III. The Disease

Category I Communicable Diseases

☐Smallpox ☐Plague
☐Severe Acute Respiratory Syndrome
☐Rabies

Category II Communicable Diseases

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

Category III Communicable Diseases

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

Category IV Communicable Diseases

☐Herpesvirus B Infection
☐Leptospirosis ☐Melioidosis
☐Botulism
☐Invasive Pneumococcal Disease
☐Q fever ☐Murine Typhus
☐Lyme Disease ☐Tularemia
☐Scrub Typhus ☐Brucellosis
☐Complicated varicella
☐Toxoplasmosis
☐Severe Complicated Influenza
☐**Creutzfeldt-Jakob disease**

Category V Communicable Diseases

☐Rift Valley Fever
☐Lassa Fever
☐Marburg Haemorrhagic Fever
☐Ebola Virus Disease
☐Yellow Fever
☐Middle East Respiratory Syndrome Coronavirus Infections
☐Novel Influenza A Virus infections
☐Zika virus infection
☐Others _____

IV. Remarks

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

For Health Agency

Signed by Person-in-charge		Signed by Section Chief	

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

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 the announcement of the Ministry of Health and Welfare, Bu-So-Ji-Zi No.1050100423 on Apr 1, 2016, included "congenital syphilis" in Category 3 Communicable Diseases.
(2) According to the announcement of the Ministry of Health and Welfare, Bu-So-Ji-Zi No.1050100179 on Feb 2, 2016, changed "zika virus infection" from Category 2 Notifiable Communicable Diseases to Category 5.
(3) According to the announcement of the Ministry of Health and Welfare, Bu-So-Ji-Zi No.1050100083 on Jan 22, 2016, included "zika virus infection" in Category 2 Communicable Diseases.
(4) According to the announcement of the Ministry of Health and Welfare, Bu-So-Ji-Zi No.1040200233 on Mar 23, 2015, removed "dengue hemorrhagic fever/ dengue shock syndrome" from Category 2 Communicable Diseases.
(5) According to Department of Health's Bulletin No. Bu-Shou-Ji-Zi-1030101208 dated Augest 8, 2014 of the Department of Health, "Ebola Haemorrhagic Fever" is changed name to "Ebola Virus Disease" in the list of Class V Notifiable Communicable Disease
(6) According to Department of Health's Bulletin No. Bu-Shou-Ji-Zi-1030101132 dated Augest 1, 2014 of the Department of Health, "Complicated Influenza" is changed name to "Severe Complicated Influenza" in the list of Class IV Notifiable Communicable Disease
(7) According to Department of Health's Bulletin No. Bu-Shou-Ji-Zi-10301009927 dated June 27, 2014 of the Department of Health, "Novel Influenza A Virus infections" is included in the list of Class V Notifiable Communicable Diseases. "H5N1 Influenza" in the list of Class I Notifiable Communicable Disease and "H7N9 Influenza" in the list of Class V are removed
(8) According to Department of Health's Bulletin No. Bu-Shou-Ji-Zi-1020103975 dated December 27, 2013 of the Department of Health, "Varicella" is changed name to "Complicated varicella" in the list of Class IV Notifiable Communicable Disease
(9) According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1020100731 dated June 7, 2013 of the Department of Health, "Novel Coronavirus Infection" is changed name to "Middle East Respiratory Syndrome Coronavirus Infections" in the list of Class V Notifiable Communicable Disease. "Cat-Scratch Disease" and "NDM-1 Enterobacteriaceae" are removed from the list of Class IV Notifiable Communicable Disease.
(10) According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1020100463 dated April 3, 2013 of the Department of Health, "H7N9 Influenza" is included in the list of Class V Notifiable Communicable Diseases.
(11) According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1020100343 dated March 14, 2013 of the Department of Health, "Severe Acute Respiratory Infections associated with Novel Coronavirus" is changed name to "Novel Coronavirus Infections" in the list of Class V Notifiable Communicable Disease.
(12) According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1020100062 dated January 24, 2013 of the Department of Health, "Anthrax" is changed from the list of Class I Notifiable Communicable Diseases to Class II.
(13) According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi- 1010101167dated October 3, 2012 of the Department of Health, is Severe Acute Respiratory Infections associated with Novel Coronavirus included in the list of Class 5 Notifiable Communicable Diseases.
(14) According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1010100098 dated February 7, 2012 of the Department of Health, Brucellosis 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.
(15) According to Department of Health's Bulletin No. Shu-Shou-Ji-Zi-1000100896 dated September 9, 2011, Class 4 Notifiable Communicable Disease "Severe Complicated Influenza" is changed name to "Complicated Influenza."
(16) 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.

(17) 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.

(18) 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.

(19) 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).

(20) 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.

(21) HIV infection：Cases must be confirmed positive by the Western Blot assay or NAT. When reporting, hospitals shall attach laboratory report of positive result or indicate agency for testing confirmation.
AIDS：In addition to prior mentioned, cases must be considered "infected" while developing symptoms of opportunistic infections such as candidiasis or pneumocystis carinii pneumonia; or CD4/ CD4 ratio complied with reporting criteria. Please fill "AIDS case report form" additionally.

(22) 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.)

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

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

Appendix 3

2017 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 1	1	2	3	4	5	6	7	week 5	29	30	31	1	2	3	4	week 9	26	27	28	1	2	3	4
week 2	8	9	10	11	12	13	14	week 6	5	6	7	8	9	10	11	week 10	5	6	7	8	9	10	11
week 3	15	16	17	18	19	20	21	week 7	12	13	14	15	16	17	18	week 11	12	13	14	15	16	17	18
week 4	22	23	24	25	26	27	28	week 8	19	20	21	22	23	24	25	week 12	19	20	21	22	23	24	25
	~~29~~	~~30~~	~~31~~						~~26~~	~~27~~	~~28~~						~~26~~	~~27~~	~~28~~	~~29~~	~~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
week 13	26	27	28	29	30	31	1	week 18	30	1	2	3	4	5	6	week 22	28	29	30	31	1	2	3
week 14	2	3	4	5	6	7	8	week 19	7	8	9	10	11	12	13	week 23	4	5	6	7	8	9	10
week 15	9	10	11	12	13	14	15	week 20	14	15	16	17	18	19	20	week 24	11	12	13	14	15	16	17
week 16	16	17	18	19	20	21	22	week 21	21	22	23	24	25	26	27	week 25	18	19	20	21	22	23	24
week 17	23	24	25	26	27	28	29		~~28~~	~~29~~	~~30~~	~~31~~					~~25~~	~~26~~	~~27~~	~~28~~	~~29~~	~~30~~	
	~~30~~																						

	July								August								September						
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat
week 26	25	26	27	28	29	30	1	week 31	30	31	1	2	3	4	5	week 35	27	28	29	30	31	1	2
week 27	2	3	4	5	6	7	8	week 32	6	7	8	9	10	11	12	week 36	3	4	5	6	7	8	9
week 28	9	10	11	12	13	14	15	week 33	13	14	15	16	17	18	19	week 37	10	11	12	13	14	15	16
week 29	16	17	18	19	20	21	22	week 34	20	21	22	23	24	25	26	week 38	17	18	19	20	21	22	23
week 30	23	24	25	26	27	28	29		~~27~~	~~28~~	~~29~~	~~30~~	~~31~~			week 39	24	25	26	27	28	29	30
	~~30~~	~~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
week 40	1	2	3	4	5	6	7	week 44	29	30	31	1	2	3	4	week 48	26	27	28	29	30	1	2
week 41	8	9	10	11	12	13	14	week 45	5	6	7	8	9	10	11	week 49	3	4	5	6	7	8	9
week 42	15	16	17	18	19	20	21	week 46	12	13	14	15	16	17	18	week 50	10	11	12	13	14	15	16
week 43	22	23	24	25	26	27	28	week 47	19	20	21	22	23	24	25	week 51	17	18	19	20	21	22	23
	~~29~~	~~30~~	~~31~~						~~26~~	~~27~~	~~28~~	~~29~~	~~30~~			week 52	24	25	26	27	28	29	30
																	~~31~~						

Acknowledgement

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

List of information providers

Centers for Disease Control, Ministry of Health and Welfare
Lo-Sheng Sanatorium and Hospital, Ministry of Health and Welfare
Department of Health, Taipei City Government
Department of Health, New Taipei City Government
Keelung City Health Bureau
Public Health Bureau, Yilan County
Public Health Bureau, Kinmen County
Bureau of Health and Welfare, Lienchiang County
Department of Public Health, Taoyuan
Public Health Bureau, Hsinchu City
Public Health Bureau of Hsinchu County Government
Miaoli County Government Public Health Bureau
Health Bureau of Taichung City Government
Changhua County Public Health Bureau
Health Bureau, Nantou County Government
Public Health Bureau, Yunlin County
Public Health Bureau, Chiayi City
Chiayi County Health Bureau
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Department of Health, Kaohsiung City Government
Public Health Bureau, Pingtung County Government
Public Health Bureau, Penghu County
Hualien County Health Bureau
Public Health Bureau, Taitung County

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