

### Performance Analysis of Taiwan CDC Facebook Fan Page

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#### Abstract

During the 2009 H1N1 pandemic, Taiwan Centers for Disease Control (Taiwan CDC) established the “1922 Epidemic Prevention Experts” Facebook Fan Page, providing people with accurate and instantaneous epidemic information. From January 1 to December 31, 2014, the number of fan page members has reached to 52,447, increased by 7,685 people; most fans are from the age group of 25–34 years (36.3%), followed by the age group of 35–44 years. Fan page members are predominately from northern Taiwan, whereas the members in "Taipei" accounted for 20,533, followed by “Taichung” (n = 6,515). In 2014, the “1922 Epidemic Prevention Experts” in average released 1 to 3 posts daily, totally 458 posts were published in that year. Most information belong to the type of "Image (photo)" (414 posts), followed by "Text Message" (34 posts). In addition to publishing “Image”, “Video” or “Links to articles” can increase the diversity of fan groups, and cooperating with fan pages of celebrity or related activity issues can increase the exchange of fan page members. The Facebook Fan Page enhances the effectiveness of spreading information and promotion.

**Keywords:** Facebook, Social media, Policy communication

## Suspected Mother-to-Child Transmission of HIV, Taipei Regional Center, 2013–2014

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### Abstract

After the implementation of comprehensive HIV screening program to pregnant women in Taiwan since 2005, mother-to-child transmission of HIV infections were significantly lower, but in 2014, three cases of mother-to-child transmission of HIV infection were reported to Taiwan Centers for Disease Control (TCDC). We characterized the 32 cases of suspected HIV baby or children reported to TCDC's Taipei Regional Center during 2013–2014. Risk factors of mother-to-child transmission of HIV infection included loss of contact prior to known pregnancy, no HIV screening test during pregnancy, no HIV treatment during pregnancy, delivered at non-AIDS-appointed hospitals; hospitals not carrying out prenatal rapid HIV screening to pregnant women, not providing prenatal intravenous prophylaxis nor performing caesarean section, and no HIV-rapid screening immediately nor prophylaxis within 6–12 hours after birth. In order to effectively prevent mother-to-child transmission of HIV infection, we need both the public health and the medical institutions to strengthen tracking HIV women whom lost contact and improve contact tracing and HIV tracking on their children under the age of 12. Medical institutions should implement HIV screening of pregnant women and refer them to AIDS-appointed hospitals, enhance rapid HIV screening for high-risk pregnant women and their newborns, and strengthen treatment capacity for HIV maternal women and suspected HIV baby.

**Keywords:** Mother-to-child transmission of HIV infection, Pregnant or maternal HIV women with unusual event, Rapid HIV screening, Suspected HIV baby

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

Classification	Case diagnosis week Disease Diagnosed <sup>1</sup>	Week 28		Week 1–28	
		2016	2015	2016	2015
Category I	Plague	0	0	0	0
	Rabies	0	0	0	0
	SARS	0	0	0	0
	Smallpox	0	0	0	0
Category II	Acute Flaccid Paralysis	0	0	18	10
	Acute Viral Hepatitis type A	42	2	575	47
	Amoebiasis	3	5	155	198
	Anthrax	0	0	0	0
	Chikungunya Fever	0	1	7	4
	Cholera	0	0	0	4
	Dengue Fever	10	38	590	362
	Diphtheria	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	0	3	0
	Malaria	0	0	6	6
	Measles	0	2	6	27
	Meningococcal Meningitis	0	0	2	2
	Paratyphoid Fever	1	0	4	3
	Poliomyelitis	0	0	0	0
	Rubella	0	0	4	6
	Shigellosis	2	1	115	97
Typhoid fever	0	0	2	17	
West Nile Fever	0	0	0	0	
Category III	Acute Viral Hepatitis type B	4	2	53	65
	Acute Viral Hepatitis type C <sup>5</sup>	8	7	118	118
	Acute Viral Hepatitis type D	0	0	1	1
	Acute Viral Hepatitis type E	0	0	10	1
	Acute Viral Hepatitis untype	0	1	0	1
	Congenital Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	1	13	4
	Haemophilus Influenza type b Infection	0	0	7	1
	Japanese Encephalitis	1	2	10	20
	Legionellosis	0	10	59	97
	Mumps <sup>2</sup>	13	10	316	428
	Neonatal Tetanus	0	0	0	0
	Pertussis	0	0	8	63
	Tetanus <sup>2</sup>	0	1	6	6
Category IV	Botulism	0	1	3	2
	Brucellosis	0	0	0	0
	Complicated Influenza	2	21	1844	707
	Complicated Varicella <sup>4</sup>	4	1	24	32
	Endemic Typhus Fever	0	0	10	16
	Herpesvirus B Infection	0	0	0	0
	Invasive Pneumococcal Disease	9	9	354	320
	Leptospirosis	3	4	35	33
	Lyme Disease	0	0	0	0
	Melioidosis	0	3	8	20
	Q Fever	0	2	26	25
	Scrub Typhus	12	15	254	195
	Toxoplasmosis	2	0	7	6
	Tularremia	0	0	0	0
Category V	Ebola Virus Disease	0	0	0	0
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0
	Novel Influenza A Virus Infections <sup>6</sup>	0	0	0	0
	Lassa Fever	0	0	0	0
	Rift Valley Fever	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0
Yellow Fever	0	0	0	0	

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.  
 2. Reported cases.  
 3. Since 2014/1/1, "Varicella" was modified to "Complicated Varicella".  
 4. Since 2014/3/6, the case definition for confirmed Acute hepatitis C was changed from "meet the clinical and laboratory conditions" to "meet the clinical or laboratory conditions".  
 5. Since 2014/7/1, various subtypes of human cases of avian influenza are reported as "novel influenza A virus infections", a Category V Notifiable Infectious Disease. The original "H5N1 flu" and "H7N9 flu", which were respectively listed as a Category I Notifiable Infectious Disease and a Category V Notifiable Infectious Disease were removed from the list on the same day.  
 6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

### Suspected Clusters

- Fifteen clusters were reported, including 6 tuberculosis clusters, 5 diarrhea clusters, 3 upper respiratory tract infection clusters, and 1 fever of unknown origin cluster.

### Imported Infectious Diseases

- 13 confirmed cases were imported from 8 countries during Week 28 of 2016.

Country Disease	Indonesia	Thailand	Singapore	Malaysia	Philippines	India	Japan	Cambodia	Total
Dengue Fever	4	2	1	1	1				9
Hepatitis A		1					1		2
Q Fever								1	1
Measles						1			1
<b>Total</b>	4	3	1	1	1	1	1	1	13

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

- A total of 373 confirmed cases were imported from 30 countries in 2016.
- Top 3 imported diseases : Dengue fever (152), Amoebiasis (69), Hepatitis A (54).
- Top 3 countries responsible for most imported cases : Indonesia (163), Thailand (42), Philippines (29).

### Summary of Epidemic

- **Enterovirus** : The epidemic activity has continued and is expected to decrease gradually during the summer vacation. Coxsackie A virus is currently the dominant strain circulating in the community. Sporadic cases of enterovirus 71 infection have been confirmed recently. This year, a total of 103 cases of enterovirus 71 infection, including 12 severe cases, 89 mild cases and 2 suspected severe cases, have been confirmed. The public is urged to enhance personal hygiene and stay vigilant for suspicious symptoms of enterovirus infection with severe complications in infants.
- **Dengue Fever** : The epidemic has increased gradually in Southeast Asian countries. Imported cases have continued to be reported. The recent high temperatures and occurrence of intermittent rain have still promoted mosquito growths, and elevated the risk of dengue transmission. The public is urged to clean up and remove any vector breeding sites and take prevention measures against mosquito bites.

- **Scrub Typhus** : The numbers of cases reported and continue increasing. The peak of scrub typhus season is during the months of June to July. The endemic areas are primarily eastern and outlying islands of Taiwan.
- **Japanese Encephalitis** : The peak of Japanese encephalitis season is during the months of June to July. Although the endemic areas are primarily central, southern Taiwan and Hualien County, sporadic cases are expected to be reported in other cities and counties.

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

Case diagnosis week		Week 29		Week 1—29	
Classification	Disease Diagnosed <sup>1</sup>	2016	2015	2016	2015
Category I	Plague	0	0	0	0
	Rabies	0	0	0	0
	SARS	0	0	0	0
	Smallpox	0	0	0	0
Category II	Acute Flaccid Paralysis	2	0	20	10
	Acute Viral Hepatitis type A	38	5	613	52
	Amoebiasis	9	7	164	205
	Anthrax	0	0	0	0
	Chikungunya Fever	0	0	7	4
	Cholera	3	0	3	4
	Dengue Fever	6	80	594	442
	Diphtheria	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	1	3	1
	Malaria	0	1	6	7
	Measles	0	0	6	27
	Meningococcal Meningitis	0	0	2	2
	Paratyphoid Fever	0	0	4	3
	Poliomyelitis	0	0	0	0
	Rubella	0	0	4	6
	Shigellosis	2	4	117	101
	Typhoid fever	1	2	3	19
West Nile Fever	0	0	0	0	
Category III	Acute Viral Hepatitis type B	2	5	55	70
	Acute Viral Hepatitis type C <sup>5</sup>	2	6	120	124
	Acute Viral Hepatitis type D	0	0	1	1
	Acute Viral Hepatitis type E	0	0	10	1
	Acute Viral Hepatitis untype	0	0	0	1
	Congenital Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	1	0	14	4
	Haemophilus Influenza type b Infection	3	0	10	1
	Japanese Encephalitis	3	2	13	22
	Legionellosis	1	7	60	104
	Mumps <sup>2</sup>	12	19	328	447
	Neonatal Tetanus	0	0	0	0
	Pertussis	1	0	9	63
	Tetanus <sup>2</sup>	1	0	7	6
Category IV	Botulism	1	0	4	2
	Brucellosis	0	0	0	0
	Complicated Influenza	2	17	1846	724
	Complicated Varicella <sup>4</sup>	0	2	24	34
	Endemic Typhus Fever	1	2	11	18
	Herpesvirus B Infection	0	0	0	0
	Invasive Pneumococcal Disease	8	6	362	326
	Leptospirosis	3	2	38	35
	Lyme Disease	0	1	0	1
	Melioidosis	1	0	9	20
	Q Fever	2	0	28	25
	Scrub Typhus	12	25	266	220
	Toxoplasmosis	0	0	7	6
Tularremia	0	0	0	0	
Category V	Ebola Virus Disease	0	0	0	0
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0
	Novel Influenza A Virus Infections <sup>6</sup>	0	0	0	0
	Lassa Fever	0	0	0	0
	Rift Valley Fever	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0
Yellow Fever	0	0	0	0	

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
2. Reported cases.
3. Since 2014/1/1, "Varicella" was modified to "Complicated Varicella".
4. Since 2014/3/6, the case definition for confirmed Acute hepatitis C was changed from "meet the clinical and laboratory conditions" to "meet the clinical or laboratory conditions".
5. Since 2014/7/1, various subtypes of human cases of avian influenza are reported as "novel influenza A virus infections", a Category V Notifiable Infectious Disease. The original "H5N1 flu" and "H7N9 flu", which were respectively listed as a Category I Notifiable Infectious Disease and a Category V Notifiable Infectious Disease were removed from the list on the same day.
6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

### Suspected Clusters

- Seventeen clusters were reported, including 8 diarrhea clusters, 5 upper respiratory tract infection clusters, 3 tuberculosis clusters, and 1 varicella cluster.

### Imported Infectious Diseases

- 12 confirmed cases were imported from 7 countries during Week 29 of 2016.

Country Disease	Indonesia	Malaysia	Vietnam	Philippines	USA	India	China	Total
Dengue Fever	1	3	1	1				6
Amoebiasis	2							2
Hepatitis A					1		1	2
Typhoid fever						1		1
Shigellosis	1							1
<b>Total</b>	4	3	1	1	1	1	1	12

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

- A total of 384 confirmed cases were imported from 31 countries in 2016.
- Top 3 imported diseases : Dengue fever (158), Amoebiasis (71), Hepatitis A (55).
- Top 3 countries responsible for most imported cases : Indonesia (167), Thailand (42), Malaysia (31).

### Summary of Epidemic

- **Enterovirus** : The epidemic activity has continued and is expected to decrease gradually during the summer vacation. Additionally, the peak of the epidemic activity is expected to be over by early August. Coxsackie A virus is currently the dominant strain circulating in the community. Sporadic cases of enterovirus 71 infection have been confirmed recently. This year, a total of 112 cases of enterovirus 71 infection, including 13 severe cases and 99 mild cases, have been confirmed. The public is urged to enhance personal hygiene and stay vigilant for suspicious symptoms of enterovirus infection with severe complications in infants.
- **Dengue Fever** : The epidemic has increased gradually in Southeast Asian countries. Imported cases have continued to be reported. The new indigenous cases have been confirmed in Tainan City and Kaohsiung City. The recent high temperatures and occurrence of intermittent rain have still promoted mosquito growths and elevated the risk of dengue transmission. The public is urged to clean up and remove any vector breeding sites and take prevention measures against mosquito bites.

- **Scrub Typhus** : The numbers of cases reported and confirmed have continued to increase. The peak of scrub typhus season is during the months of June to July. The endemic areas are primarily eastern and outlying islands of Taiwan.
- **Japanese Encephalitis** : The peak of Japanese encephalitis season is during the months of June to July. Although the endemic areas primarily include central and southern Taiwan and Hualien County, sporadic cases are expected to be reported in other cities and counties.

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

Case diagnosis week		Week 30		Week 1—30	
Classification	Disease Diagnosed <sup>1</sup>	2016	2015	2016	2015
<b>Category I</b>	Plague	0	0	0	0
	Rabies	0	0	0	0
	SARS	0	0	0	0
	Smallpox	0	0	0	0
<b>Category II</b>	Acute Flaccid Paralysis	1	0	21	10
	Acute Viral Hepatitis type A	33	4	646	56
	Amoebiasis	6	6	170	211
	Anthrax	0	0	0	0
	Chikungunya Fever	0	0	7	4
	Cholera	0	0	3	4
	Dengue Fever	11	127	605	569
	Diphtheria	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	0	3	1
	Malaria	0	0	6	7
	Measles	0	0	6	27
	Meningococcal Meningitis	0	0	2	2
	Paratyphoid Fever	0	0	4	3
	Poliomyelitis	0	0	0	0
	Rubella	0	0	4	6
	Shigellosis	4	2	121	103
	Typhoid fever	0	2	3	21
West Nile Fever	0	0	0	0	
<b>Category III</b>	Acute Viral Hepatitis type B	0	3	55	73
	Acute Viral Hepatitis type C <sup>5</sup>	3	5	123	129
	Acute Viral Hepatitis type D	0	0	1	1
	Acute Viral Hepatitis type E	0	0	10	1
	Acute Viral Hepatitis untype	0	0	0	1
	Congenital Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	1	0	15	4
	Haemophilus Influenza type b Infection	0	0	10	1
	Japanese Encephalitis	2	1	15	23
	Legionellosis	3	2	63	106
	Mumps <sup>2</sup>	10	15	338	462
	Neonatal Tetanus	0	0	0	0
	Pertussis	1	0	10	63
	Tetanus <sup>2</sup>	0	0	7	6
<b>Category IV</b>	Botulism	0	0	4	2
	Brucellosis	0	0	0	0
	Complicated Influenza	3	12	1849	736
	Complicated Varicella <sup>4</sup>	1	1	25	35
	Endemic Typhus Fever	0	1	11	19
	Herpesvirus B Infection	0	0	0	0
	Invasive Pneumococcal Disease	8	5	370	331
	Leptospirosis	1	2	39	37
	Lyme Disease	0	0	0	1
	Melioidosis	4	0	13	20
	Q Fever	0	1	28	26
	Scrub Typhus	14	16	281	236
	Toxoplasmosis	0	0	7	6
Tularremia	0	0	0	0	
<b>Category V</b>	Ebola Virus Disease	0	0	0	0
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0
	Novel Influenza A Virus Infections <sup>6</sup>	0	0	0	0
	Lassa Fever	0	0	0	0
	Rift Valley Fever	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0
Yellow Fever	0	0	0	0	

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
2. Reported cases.
3. Since 2014/1/1, "Varicella" was modified to "Complicated Varicella".
4. Since 2014/3/6, the case definition for confirmed Acute hepatitis C was changed from "meet the clinical and laboratory conditions" to "meet the clinical or laboratory conditions".
5. Since 2014/7/1, various subtypes of human cases of avian influenza are reported as "novel influenza A virus infections", a Category V Notifiable Infectious Disease. The original "H5N1 flu" and "H7N9 flu", which were respectively listed as a Category I Notifiable Infectious Disease and a Category V Notifiable Infectious Disease were removed from the list on the same day.
6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

### Suspected Clusters

- Eight clusters were reported, including 6 tuberculosis clusters, 1 diarrhea cluster, and 1 upper respiratory tract infection cluster.

### Imported Infectious Diseases

- 17 confirmed cases were imported from 6 countries during Week 30 of 2016.

Country Disease	Indonesia	China	Vietnam	Philippines	Cambodia	Thailand	Total
Dengue Fever	3		2	2	1	1	9
Amoebiasis	3						3
Hepatitis A	1	2					3
Shigellosis	1						1
Scrub Typhus		1					1
<b>Total</b>	8	3	2	2	1	1	17

Note: The statistics listed in this table include imported cases that were either confirmed or updated<sup>\*</sup> in the previous week.

- A total of 401 confirmed cases were imported from 31 countries in 2016.
- Top 3 imported diseases : Dengue fever (167), Amoebiasis (74), Hepatitis A (58).
- Top 3 countries responsible for most imported cases : Indonesia (174), Thailand (43), Malaysia (32).

### Summary of Epidemic

- **Dengue Fever** : The epidemic has increased gradually in Southeast Asian countries. Imported cases have continued to be reported. The recent high temperatures and occurrence of intermittent rain have still promoted mosquito growths and elevated the risk of dengue transmission. The public is urged to clean up and remove any vector breeding sites and take prevention measures against mosquito bites.
- **Scrub Typhus** : The numbers of cases reported and confirmed have continued to increase. The peak of scrub typhus season is during the months of June to July. The endemic areas are primarily eastern and outlying islands of Taiwan.
- **Japanese Encephalitis** : The peak of Japanese encephalitis season is during the months of June to July. Although the endemic areas primarily include central and southern Taiwan and Hualien County, sporadic cases are expected to be reported in other cities and counties.

●**Enterovirus** : The epidemic activity has continued and is expected to decrease gradually during the summer vacation. Additionally, the peak of the epidemic activity is expected to be over by early August. Coxsackie A virus is currently the dominant strain circulating in the community. Sporadic cases of enterovirus 71 infection have been confirmed recently. This year, a total of 116 cases of enterovirus 71 infection, including 13 severe cases, 102 mild cases and 1 suspected severe cases, have been confirmed. The public is urged to enhance personal hygiene and stay vigilant for suspicious symptoms of enterovirus infection with severe complications in infants.

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