



Infectious Disease: Prevention Strategies & Emergency Response Procedures

Yen-Jen Sung, MD, PhD

Commissioner

Department of Health

Taipei City Government



Taipei City SARS Epidemic of 2003 ¹

- The first case of SARS in Taiwan-Area:
A China-based Taiwanese businessman, Mr. Chin, and his wife reported **March 14, 2003**, the first immigrated & local cases
- **April 24, 2004: Heping Hospital Sealed for Isolation**
- **March-August, 2003: 1539** cases reported by hospitals & clinics in metro Taipei; **157** Taipei residents
- **June 17, 2003**, Taiwan removed from WHO's travel alert list
- **July 15, 2003**, Taiwan removed from **Epidemic Region** list



Taipei City SARS Epidemic of 2003 ²

Residential quarantine

- 26,942 **grade A** quarantined persons
(direct contact with potential SARS patients)
- 13,358 **grade B** quarantined persons
(returning from epidemic regions)
- Of all quarantined, **12 ($\approx 0.030\%$)** diagnosed as potential or suspected SARS cases



Preparedness to Counter SARS ₁

1. Organization Overhaul

Division for Disease Control and Prevention

Disease Control & Prevention Branch

Infectious Disease Specialized (Heping) Branch & Research Center

2. Nosocomial Infection Control

Fever screening stations for all incoming patients

Training and education of hospital staff

Nosocomial infection prevention

Life-saving equipment inventory system for tracking and distribution

“Total care” nursing system: family members discouraged to stay

3. Surveillance & Reporting

Reporting/Sharing of notifiable disease surveillance data

Mobile community-based infectious disease prevention teams

Integrated disease control measures with CDC of central government



Preparedness to Counter SARS ₂

4. Emergency Response System

Integrated infectious disease information system

Emergency Operation Center (EOC)

Incident Command System (ICS)

Disease Prevention Consulting Committee (DPCC)

5. Health Education

2004 Asia-Pacific Anti-bioterrorism Symposium -

380 participants including medical professionals, hospital administrators, college personnel, fire service, police, professional and general public

“General medicine” (PGY1) training course for all resident physicians



Taipei City Government

Department of Health

- Disease Control and Prevention Division**
- Food and Drug Division
- Medical Affairs Division
- Health Promotion Division
- Research and Planning Division
- Laboratory**
- System Administration Office
- Statistics Office
- Administrative Services
- Accounting Office
- Personnel Office
- Government Ethics Office

Taipei City Hospital

- Zhongxing Branch
- Renai Branch
- Heping Branch**
- Yangming Branch
- Zhongxiao Branch
- Chinese Medicine Branch
- Disease Control and Prevention Branch**
- Women and Children Branch

Taipei Municipal Wanfang Hospital

Taipei Municipal Guandu Hospital

12 District Health Centers



Taipei City Emergency Response System

Annual "Total Security" Drill (萬安演習)

300 held hostage by 6 armed BIOferrorists from ...



August 24, 2005



New & Emerging Infectious Diseases₁

1. **Avian influenza** as a legally defined infectious disease: Dec. 29, 2004.
National security level of alert announced last month.
2. Epidemic Watch:
 - (1) Body temperature monitor for poultry/livestock/pet bird business workers
 - (2) Human avian influenza infections and reporting
3. **Joint Prevention Task Force** supported by different agencies:
TCG **Joint Prevention Task Force for Avian Flu**
Assistance & consultation for poultry/livestock/pet business workers
Close monitor for all incidents of avian flu
4. Isolation, hospitalization, and treatment resource integration



New & Emerging Infectious Diseases₂

Avian Flu Prevention & Control Drills



Legend:

*Department of Health receives reports from **animal inspection division** of chickens possibly carrying avian influenza virus ...*

Staff dispatched to the scene pack euthanized chickens into plastic bags. Workers are evacuated from danger zones and sprayed thoroughly with disinfectant solution by the cleaning staff (esp. armpit, groin and feet)



New & Emerging Infectious Diseases₃

Joint Prevention Task Force for Bird Flu: Experts in Health, Animal Inspection & Education Departments provide assistance, education and consultation specifically to Zoos, Nature Parks, Poultry/Pet Businesses



Staff from Departments of Economic Development and Environment Protection visiting Guandu Nature Park for disease prevention education programs



Staff from Departments of Economic Development and Health were visiting Pet Bird/Poultry vendors for disease prevention education



Enterovirus Epidemic 1

School campus-reported enterovirus cases

- **School Reporting System**

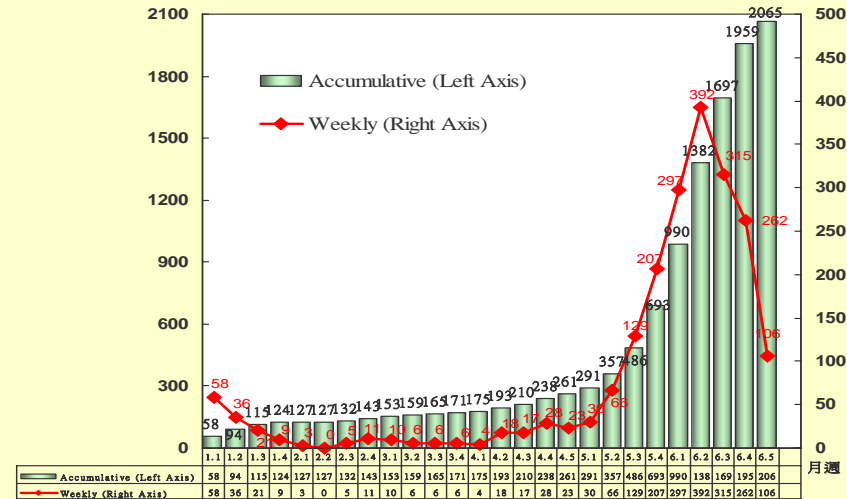
2,065 cases reported by child care facilities (pioneering model first established in Taipei)

- **Hospital Reporting System**

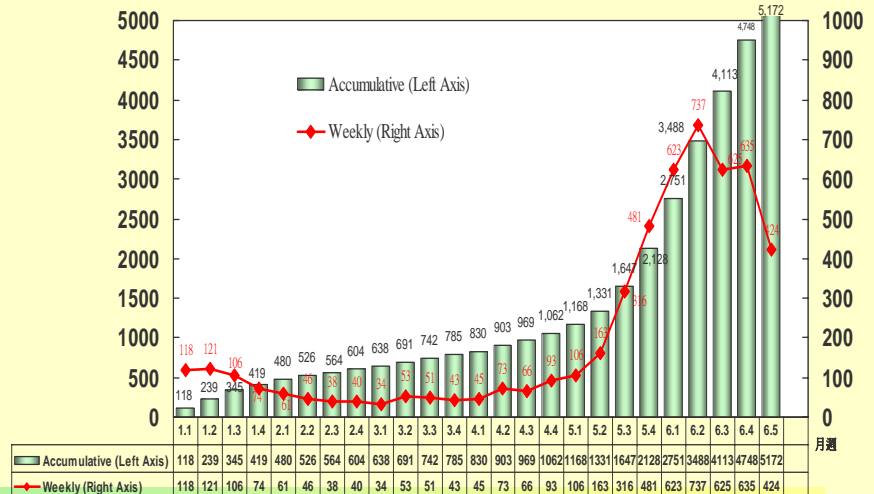
Emergency Care facilities reported 5,172 cases; 397 Taipei City residents

13 complicated with severe symptoms
 --7 excluded enteroviral infection
 --6 confirmed

(as of June 30, 2005)



Emergency care -reported enterovirus cases





Enterovirus Epidemic₂

Strategies

- Enhanced Health Education
- Advocate frequent hand washing and equipment cleaning (*wet, rub, rinse, hold, wipe*)
- Improve inter-agency cooperation
- Improve epidemic surveillance systems
- Establish bilingual reporting system





Taipei City Notifiable Disease Statistics

Total Case of 2004 (ND Defined by Law)

	TAIWAN	Taipei
Tuberculosis	10523	903
HIV Infection	1570	210
Scarlet Fever	759	130
Dengue Fever	420	12
AIDS	260	41
Bacillary Dysentery	146	22
Legionnaire's Disease	105	18
Enterovirus (severe case) associated symptoms	49	4
Typhoid	37	7
Encephalitis B.	32	0
Amoebic Dysentery	31	10
Pertussis	21	3
Influenza (severe case)	19	4
Malaria	18	5
Dengue Hemorrhagic Fever	7	0



Future Efforts for for Disease Prevention

1. Professional mobile disease prevention teams
2. Efficiency of infectious disease reporting
3. Occurrence prevention & mortality reduction
4. Nosocomial infection prevention
5. Effective community surveillance & reporting
6. Efficient investigation of reported cases
7. **International collaboration**

Welcome to Taipei

