into quarantine rooms on the first floor of each dormitory, providing continuous surveillance on students' health in general, requiring all students to wear masks, launching a wash-hands-often campaign, and carrying out a thorough cleaning up and disinfections process in and around school areas such as classrooms, dormitories, co-op store, and dining halls on the premises. After implantation of these measures, no more new cases of influenza infections and GI diseases were found in school from January 12th 2007, and hence the outbreak surveillance and associated follow-ups were then officially ended on January 19th.

Epidemiology and Surveillance System of Human Influenza Viruses

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Human influenza viruses have many subtypes, continuous and fast evolutionary changes, short incubation period, and capability of wide spread. To avoid regional epidemics and pandemics, surveillance becomes the most effective prevention and control measure. The commonly implemented influenza surveillance systems are: (1) clinical surveillance, (2) virological surveillance, and (3) serological surveillance.

Influenza viruses spread rapidly through respiratory droplet transmission and contact transmission. Important factors involved in the transmissibility of influenza viruses include the density of susceptible population, level of herd immunity, and molecular sequences of influenza viruses. Thus specimen collections, virus isolations and sequence analysis play an important role in influenza surveillance. Influenza symptoms include fever, myalgia, headache,

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sore throat, nonproductive cough, rhinitis and fatigue and sometimes it will lead to serious complications and even deaths. The symptoms vary among different age groups and types or subtypes of the influenza viruses. In Taiwan, vaccination program of influenza is free for high risk groups including healthcare workers. Notably, human influenza virus surveillance should integrate clinical symptoms, epidemiological characteristics, types/subtypes of influenza viruses and variations in their nucleotide and amino acid sequences plus carbohydrate components. Based on these valuable data, we can understand whether the novel influenza virus has entered into Taiwan or whether the outbreak is due to vaccine failure. To meet possible future challenges of novel influenza, we have developed our hospital emergency department-based syndromic surveillance since 2003.

Influenza surveillance involves national, regional and global systems. International collaboration on early detection and immediate prevention and control measures will be our future efforts.

How to Effectively Carry out Domestic Management of Laboratory Bio-safety

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From March 26th 2006, Taiwan has officially brought into effect the "Regulation Governing Management of Infectious Biological Materials and Collection of Specimens from Patients of Communicable Diseases." One of its core aims is to enable every institution equipped with biological laboratories in this nation to effectively carry out laboratory bio-safety management in a self-regulated manner. However, not even half a year after the launch of such regulation, a breakout of a laboratory-related Shigellosis infection occurred at a university in Central Taiwan. The fact that the school failed to take control of the situation at the first place indicating that there appeared to be plenty of room for improvement in their capability of independent management of laboratory bio-safety issues. Last year (2006) Taiwan CDC, through a nation-wide questionnaire survey of all work personnel (including laboratory supervisors, pathology and research staffs, and laboratory engineers and maintenance personnel) of domestic laboratories of bio-safety level-3 (BSL-3) and above, discovered the following three facts: Firstly, laboratory operators at basic levels in general had insufficient knowledge on their own laboratory bio-safety

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