

Data Management in SARS Outbreak

System prior to 12 April 2003

The Department of Health (DH) has a data management system for outbreaks of communicable diseases. Health care providers including general practitioners and hospitals notify DH through mailing or faxing notification forms. Field epidemiologists start investigation and collect information on cases and contacts through interviews and field visits. The information collected is entered into the EPI-INFO v.6, a computer programme developed by the Centre for Disease Control (CDC) of the United States.

DH initiated the outbreak control system on 11 March 2003. As the outbreak evolved, it was felt that a new system should be developed to allow timely access of patient information by field epidemiologists to facilitate early investigation work.

eSARS

eSARS is a web based computer application jointly developed by the Hospital Authority and DH. There are two components. The case list component provides hospitals admission and clinical information. The contact tracing component enables the four Designated Medical Centres and field epidemiologists to capture information of close contacts and assist in the monitoring of 10 day medical surveillance.

Development of e-SARS commenced on 5 April 2003. It was launched on 12 April when information could only be read online. After fine-tuning, all information could be downloaded by DH for further investigation in the following week.

MIIDSS

MIIDSS is the police crime investigation computer system. Since 13 April 2003, the Police has used MIIDSS to do the linkage analysis of cases and produced a report of "hotspot" to indicate the potential clustering of cases to DH. This has assisted DH field epidemiologists in its investigation.

SARS-CCIS (SARS-Case Contact Information System)

As EPI-INFO v.6 could not run on a shared network, each Regional Office had to keep a separate dataset of SARS cases and contacts and the Statistics Unit in DHHQ had to consolidate the EPI-INFO datasets of the four regions.

To facilitate efficient data management, DH started to develop SARS-CCIS in late April. The system was launched on 2 May 2003. Since 19 May 2003, SARS-CCIS added cluster analysis function for field epidemiologists to construct cluster trees and extract cases of identified clusters for analysis.

With the implementation of the above three systems, the information flow can be illustrated as per the Annex.

Information flow

Annex

