

# **Government's Approach to the Control of SARS Outbreak**

## **Purpose**

This note provides updated information of the Government's approach in controlling the Severe Acute Respiratory Syndrome (SARS) outbreak in Hong Kong and a summary and statistical analysis of SARS cases.

## **Background**

2. The outbreak of SARS in early March 2003 has brought about significant and disruptive impacts in the local as well as the global community. In two months, more than 6,000 people from different parts of the world have been infected. Despite the unprecedented progress made by the scientific community, both locally and internationally, much remains unknown about the new disease: knowledge of this new variant of coronavirus is still evolving.

3. The Government has worked closely with local researchers and healthcare providers, as well as the World Health Organization (WHO) and health authorities in the Mainland and nearby countries since the beginning of the SARS epidemic to exchange information and experience about the disease, and to implement effective public health and infection control measures to contain its spread. Our measures to control the disease have benefited greatly from such collaborative efforts.

## **The Overall Approach**

4. The first and foremost mission of the Government is to contain the spread of SARS and control the outbreak. The overall approach is centred on "early detection, swift contact tracing, prompt isolation and quarantine, and effective containment". Based on this approach, the measures put in place are described below.

### Early Detection and Swift Contact Tracing

5. Early case detection leads to prompt treatment which in turn improves health outcome. Early detection also results in swift contact tracing

which then triggers off a series of preventive measures including home confinement. Hence, the Government has established a comprehensive public education programme to heighten awareness of SARS symptoms. The purpose is to shorten the onset of symptoms to hospital admission interval, and facilitate swift contact tracing.

6. Modern technology has been deployed to improve the timeliness and accuracy of the contact tracing. In partnership with the Hospital Authority, an on-line e-SARS database has been developed, providing real time information of confirmed or suspected SARS patients to the Department of Health to carry out prompt case investigation and rapid contact tracing.

7. The work of contact tracing has also been considerably strengthened using the highly sophisticated computer system of the police, called the Major Incident Investigation and Disaster Support System (MIIDSS). The system allows SARS investigators to validate addresses, map out the geographical distribution, reveal potential sources or routes of spread, and show the connectivity, or otherwise, between cases and contacts.

#### Prompt Isolation and Quarantine

8. Using information that is accurate and transmitted on-line, contacts of SARS patients can be identified swiftly, and actions of home confinement and medical surveillance of up to 10 days implemented rapidly. Public health nurses monitor the health conditions of these contacts to ensure early presentation if they develop SARS symptoms, further enabling those infected to be given early treatment, and importantly, preventing them from spreading SARS to others.

9. As at 5 May, a total of 1,080 persons (from 425 households) had been affected by this requirement, of whom only 108 persons (from 47 households) were still under home confinement. The Government has also provided assistance e.g. the provision of daily necessities and financial assistance to 738 of these affected persons (from 283 households).

10. The implementation of the home confinement arrangement has been smooth. So far, only 2 cases were referred to the Police for tracing of defaulters. A total of 31 household contacts who developed symptoms of

SARS had been referred to hospitals for investigation. As at 5 May, 16 of them were confirmed to have SARS.

### Effective Containment of SARS

#### *Multi-disciplinary Response Teams*

11. To contain SARS effectively, multi-disciplinary response teams have been established. Amongst others, these comprise public health, building and environmental hygiene experts who undertake the dual functions of investigation as well as carrying out remedial actions in black spots or buildings with the potential of an outbreak.

12. When two or more unrelated SARS cases occur in a residential building, the multidisciplinary response teams immediately proceed to interview the households, investigate the building and its services, such as drainage and other piping systems, lifts and sewerage systems. Environmental swabs are taken for laboratory testing. The cleanliness of the building and its surroundings is inspected, with particular attention paid to refuse storage and collection.

13. In addition, the multidisciplinary response teams will carry out advance actions of environmental decontamination and pest control in these buildings or areas. The building management is further alerted to the need to step up cleaning and to disinfect common areas. In the process, guidelines or directives may be issued to rectify any health hazards. Individual households are also given pamphlets with advice on proper household cleansing and disinfection.

#### *Protection of healthcare workers*

14. Protection of healthcare workers continues to be accorded top priority by the Government. Apart from effective treatment for SARS patients, it is also most important that health care workers are protected effectively to avoid being infected by the disease. In this context, our hospital staff are provided with training in infection control before being deployed to high-risk areas with the appropriate set of protective gear. In the control of hospital infection, environmental factors have also been found to be important, resulting

in ventilation systems in the hospitals being improved. To minimize the risk of the disease spreading from the hospital to the community, no visitor is allowed in SARS wards, and visits to non SARS wards are strictly controlled and limited.

### *Health Checks At Border Points*

15. Since 29 March, medical posts have been set up at the airport, ports and border points to watch for travellers displaying symptoms of SARS, and all incoming travellers are required to complete a health declaration. To enhance the preventive measures in containing the spread of SARS, temperature checks for all arriving, departing and transit passengers at the Hong Kong International Airport have also been implemented since mid-April. Since 14 April, all close contacts of SARS patients are also barred from leaving Hong Kong during the home confinement period.

16. As regards other control points, arriving passengers via ports and land boundary crossings are subject to temperature screening in addition to health declaration with effect from 26 April 2003. 35 infra-red devices were installed at Lo Wu immigration control point for fever screening of arriving passengers. Another 27 devices will be installed in Lok Ma Chau immigration control point within this week. A total of about 300 infrared devices will be installed at various immigration control points by end May, eventually to mandate all arriving passengers to undergo screening. Relevant authorities of Hong Kong and Shengzhen have agreed to implement synchronized temperature screening procedure for arriving passengers crossing the land border. The arrangement would minimize the duplication of work and streamline the procedure. As at 5 May, 37 persons had been referred to hospitals for suspected SARS since the implementation of all the above health checking measures, of which 2 were later confirmed to have SARS.

### **Public Education as a Long-term Strategy**

17. The Government considers it most important that the standard of personal and environmental hygiene in the community must be maintained and sustained. Together with other sectors in the community, the Government has carried out ongoing public education programmes on this front. However, sustainability must involve participation and initiatives from the community.

The ultimate goal would be for all sectors and each and every individual in the community to play their part in maintaining a high standard of personal and environmental hygiene. This is an integral part of our long-term strategy in fighting SARS, and for that matter, any other infectious diseases that may emerge.

### Summary of cases

18. As at 5 May, a total of 1,637 patients have been admitted to public hospitals with Severe Acute Respiratory Syndrome (SARS), among whom 366 are health care workers or medical students. There are also 27 suspected cases.

19. On 5 May, 13 SARS patients have recovered from the disease and been discharged from hospitals, hence increasing the total number of recovered patients to 930 (i.e. 56.8% of all SARS patients). There are currently 520 SARS patients remaining in hospitals, of whom 91 are undergoing convalescence before discharge and 77 are receiving treatment in intensive care units. Most patients are showing positive responses to the treatment protocol. There are a total of 187 fatal cases.

### Analysis of statistics

#### New cases reported

20. The decreasing number of new cases over the past 6 weeks is encouraging (see Figure 1). The daily number of new cases has decreased from the peak of 80 in late March to 8 in early May. We urge members of the public to continue their efforts to incorporate good hygienic practice into their living, and guard against lapses in personal and environmental hygiene.

*Figure 1: Daily Number of New Cases Reported in the Past 6 Weeks*

| <i>Period</i>       | <i>Daily number of new cases reported</i> |                |
|---------------------|---|----------------|
|                     | <i>Range</i>                              | <i>Average</i> |
| 25 March - 31 March | 25 – 80                                   | 49             |
| 1 April - 7 April   | 23 – 75                                   | 39             |
| 8 April – 14 April  | 28 – 61                                   | 44             |

|                     |         |    |
|---------------------|---------|----|
| 15 April - 21 April | 22 – 42 | 30 |
| 22 April - 28 April | 14 – 32 | 22 |
| 29 April – 5 May    | 8 – 17  | 11 |

### Patient Load in Hospital

21. Since mid-April, the number of recovered and discharged patients has been steadily increasing – from a cumulative total of 84 on 1 April to 930 on 5 May. The number of patients under treatment in hospitals (including those who are undergoing convalescence before discharge) has therefore been decreasing – from the peak of 960 on 17 April to 520 on 5 May.

Health, Welfare and Food Bureau

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