LESSONS AND THEMES

V. GENERAL LESSONS

5.1 The most important lesson from the SARS experience is that we must be prepared for new and emerging infectious diseases. The fact that the review has indicated significant shortcomings of system performance, particularly in the early phase of the epidemic, is hardly surprising. Indeed it would appear that the same was true of other jurisdictions which had to face the problem. The Committee has grouped its findings and ideas into a number of common themes.

VI. ORGANISATION OF HEALTH AND HEALTHCARE SYSTEM FOR THE CONTROL OF AN OUTBREAK OF COMMUNICABLE DISEASE

6.1 The SARS epidemic has highlighted several deficiencies and ambiguities that exist in the relationship between HWFB and DH, and between DH and the rest of the healthcare community. It has also amplified tensions between the political and administrative structure. For example, it is not clear who performs the function of "surgeon general" or "chief medical officer". There is an imbalance between responsibility, authority and accountability in the health system. The current organisational separation between HWFB and DH may lead to a lack of coherence in policy development, decision making, funding and resource allocation, systems in monitoring, audit and accountability.

- **The Government should review the organisational structure and the relationship between the HWFB and the constituent Government departments under the Bureau in the areas of health, social welfare and food. Consideration should be given to merging the functions**

of separate departments within HWFB, headed by SHWF, in order to improve the capacity for coordination across the departments and to facilitate policy making and commissioning for health protection matters.

- **The Bureau under the leadership of SHWF should consider what changes are necessary to ensure that the necessary systems to coordinate the activities and responsibilities of DH and HA and the private sector are all in place.**

6.2 When many individuals and organisations are involved in the management of any serious outbreaks of communicable diseases, it is important both to ensure effective coordination and to maintain public confidence that one individual is seen to lead the response. Most outbreaks (eg food poisoning) are likely to be handled at the regional office level of the DH as a matter of routine, and should be led by the senior communicable disease epidemiologist/public health physician for that area. In a major outbreak, responsibilities and accountabilities may change. A more senior person in DH may take the leadership role and other responsibilities may be delegated. In a public health emergency, such as the SARS epidemic, it may require the direct involvement of the highest level of Government in order to ensure that appropriate resources are made available. A clear distinction should continue to be made between professional and political decisions.

- **The command and control structure to manage an outbreak or epidemic needs to be clear. Consideration should be given to the establishment of a small command group, chaired by SHWF, with a limited number of personnel, such as the Permanent Secretary of the Bureau, the Director of Health and the Chief Executive of HA. This body should be responsible for taking all major decisions, such as invoking public health legislation, closure of hospitals, and quarantine of residential areas.**

There should be clarity established beforehand, as to what decisions are taken at what level and by whom during an epidemic, in a major incident plan. The authority and responsibilities of DH in all aspects of epidemiological management, including surveillance and contact tracing, need to be clearly understood and adhered to by all parties.

6.3 HA appears to have responded promptly both to the perceived threat of community-acquired pneumonia in February and to the outbreak of SARS at Prince of Wales Hospital in March. However, coordination between HA and DH in response to the outbreak appears to have been poor, and there seems to have been a failure in the system to enable full appreciation of the public health implications of the hospital outbreak for the wider community.

6.4 As the epidemic developed, several tensions became evident within HA, many of which were connected to failures of communication (eg between management and frontline staff) or lack of clarity about roles and responsibilities (eg of Board members, senior executives and academic staff). Contingency arrangements had not been well planned (eg the significant impact on efficiency of response after the Chief Executive of HA contracted SARS). The epidemic also revealed more general weaknesses in the working relationships between HA hospitals and DH regional offices.

6.5 Since July 2003, HA has taken over responsibility for general out-patient clinics formerly run by DH. This means that primary care will need to have greater emphasis within the HA and, within the context of a community outbreak, this will require more effective coordination of activities with DH and with family doctors in the private sector.

- **HA should review its contingency planning arrangements to ensure that –**
  - **Hospitals and clusters recognise the primacy of DH in managing hospital outbreaks that threaten the health of the population**

- **There is free flow of information between hospitals and the regional offices of DH and systems to support this are developed**
- **There are clear chains of command to ensure communication and implementation of HA decisions and advice in response to an emergency**
- **HA management arrangements are sufficiently resilient to cope with the absence of key staff and sufficiently streamlined to respond rapidly to a crisis**
- **There is coordination of activities with the private sector in primary care.**

- **HA needs to develop clarity over the role of its own Board during the management of an outbreak, and the role of the Board of individual hospitals. Consideration should be given to the value of utilising the experience and skills of Board members in communicating with staff, patients and local populations.**

- **Consideration should be given to changing the name of HA, for example to the Health Services Authority, in order to reflect its wider responsibilities.**

VII. HEALTH PROTECTION FUNCTIONS

7.1 Although the existing communicable disease control mechanism has served Hong Kong well for many years, the SARS epidemic has exposed many weaknesses in the system, particularly when faced with the threat of a major new disease. These include shortcomings in surveillance and information systems, problems with organisational coordination related to the structure of the health system, and deficiencies in manpower and specialist expertise in field epidemiology and infectious disease control. A new public health infrastructure will be appropriate for consolidating existing disease control strategies and addressing new challenges.

- **The Government should establish a Centre for Health Protection (CHP) that will have responsibility, authority and accountability for the prevention and control of communicable disease. As it develops, this centre will also have responsibility for advising on all aspects of health protection, including food safety and hygiene, veterinary issues, non-communicable diseases and their risk factors, etc. It will also be responsible for maintaining close working relationships with national and international agencies for communicable disease control.**

- **The CHP, backed up by appropriate statutory powers, should include the following key functions –**

  - **Public health surveillance**
  - **Investigative capacity in communicable disease and environmental epidemiology**
  - **Analytical capacity in information technology, data management, and system development**
  - **Training**
  - **Surge capacity**
  - **Health education and evaluation**
  - **Applied research.**

7.2 Although many of the powers necessary for the control of SARS already existed, the epidemic did highlight some deficiencies in legislation, particularly in relation to border controls. There is a need for legislation to keep pace with modern developments, such as the increase in international travel.

- **There should be a review of the law on infectious diseases in order to –**

  - **Expand the list of notifiable diseases to assist harmonisation of communicable disease surveillance in the Pearl River Delta region**

- **Establish the primacy of DH as the enforcement agency for communicable disease outbreaks whether they occur in hospitals or in the community**
- **Ensure that both public and private sectors are required to cooperate and collaborate with DH when dealing with the threat of a communicable disease outbreak**
- **Clarify the legal powers available to DH officers.**

VIII. COORDINATION WITHIN HONG KONG

8.1 Effective communication is vital at every level when dealing with a major outbreak. There must be clear lines of responsibility between HWFB and DH; between DH and HA; between DH head office and the regional offices; and between regional offices and hospital clusters or individual hospitals. This should include greater clarity about their respective roles and responsibilities in managing the public health aspects of communicable disease and in managing outbreaks from a population-based perspective. There needs to be an authoritative visible spokesperson.

8.2 The Committee notes that a number of measures were taken during the epidemic to mitigate problems relating to cooperation or coordination. Examples of these measures include establishing three ad hoc, interim bodies, namely the HWFB Task Force, the Chief Executive's Steering Committee and the Inter-departmental Action Coordinating Committee.

- **The Government should ensure that HWFB, DH and HA each have in place (at every level) a major outbreak control plan that –**
  - **Explains the circumstances in which it will be activated**
  - **Describes how an outbreak control team will be convened**

- Specifies the responsibilities of key individual team members
- Takes a population-based perspective
- Defines the respective roles of HWFB, DH and HA, and explains clearly the chain of command at all levels: operational, tactical and strategic
- Describes the mechanisms for coordinating the outbreak response across all sectors in the health system
- Includes coordination of activities with the private, voluntary and business sectors
- Addresses key areas such as staff training, information flow, patient management, contact tracing, quarantine and isolation
- Identifies resources that can be rapidly mobilised and shared across organisational boundaries, including arrangements for seconding staff
- Incorporates arrangements for replacing key staff with appropriately trained deputies, should they become unavailable
- Embraces generic plans, site-specific plans and event-specific plans.

- The HWFB plan should include arrangements for convening an Inter-departmental Action Coordinating Committee to coordinate the actions of relevant Government bureaux and departments
- Plans should be developed in collaboration with the CHP and regularly tested at all levels by means of desktop exercises and drills and communicable disease outbreaks should be viewed as an integral part of contingency planning.

8.3 The basis of epidemic control lies with taking a population-based approach in which both DH and HA work together. To do this, their respective roles, responsibilities and accountabilities need to be spelt out explicitly. There should also be a greater appreciation that since patients and staff are drawn from the community, communicable disease incidents in the hospital may have wider implications for the community at large.

- **For outbreak control, a population-based approach is needed, in which DH will take the lead, regardless of whether the outbreak occurs in hospitals or in the community, and work together with HA as appropriate with agreed protocols.**

8.4 Part of the current problems stems from a lack of standing of public health staff among clinical colleagues. It is essential that staff in the public health service are properly trained and supported. At the operational level, there needs to be good working relationships between public health staff and clinicians, particularly hospital microbiologists and infectious disease clinicians, and also between public health staff and private doctors in the primary care sector. Clinicians, public health staff, and policymakers need to share a common understanding of the public health implications of communicable diseases and the importance of effective infection control.

- **The following should be done to improve collaboration between DH and HA –**
  - **Infection control and epidemiological experts should be based in every major hospital, working as employees of DH seconded to HA. These individuals will have responsibility for hospital infection control, data collection and reporting, and regular liaison between colleagues in HA and DH**
  - **Staff should be encouraged to rotate through the different systems including DH, HA and the universities as appropriate**

- **Resources (staff and funding) should be brought together to deal with future outbreaks from a population perspective**
- **The geographic boundaries defining DH regions and HA hospital clusters should be re-examined with the aim of making the geographic areas of responsibility co-terminous**
- **There should be closer day-to-day working relationships between public health professionals and clinical colleagues in hospitals and primary care.**

- **There should be better collaboration between hospitals, and between the hospital, primary care and public health service sectors particularly in respect of disease surveillance and infection control.**

8.5 The Committee notes that there were attempts at joint initiatives between DH, HA and the private sector, which involved private sector participation in the surveillance of communicable disease, etc. However, the interface between public and private sectors could be further strengthened.

- **In order to enhance the role of the private sector in communicable disease control –**
  - **The private sector (private hospitals, private laboratories, family medicine and traditional Chinese medicine practitioners) should be more fully involved in communicable disease surveillance**
  - **The development of a web-based system for electronic notification by private practitioners and for providing regular updates of surveillance results to private practitioners should be explored**
  - **DH/CHP should promote better standards of infection control in primary care and the residential care services**

- **The Visiting Medical Officer scheme should be made permanent to provide support and care to the elderly in residential care homes and to assist in disease surveillance.**

IX. COLLABORATION WITHIN PEARL RIVER DELTA REGION AND WITH INTERNATIONAL COMMUNITY

9.1 Communicable diseases do not respect geographical boundaries. A pre-requisite to the effective management of public health incidents, such as communicable disease outbreaks, is that stakeholders must work together as equal partners. Key to this partnership is the willingness to share information openly and in a timely fashion. The Committee notes that public health professionals in DH had been unable to obtain information from their counterparts in the Guangdong Province, and collaboration between clinicians and medical academics in Hong Kong and Guangdong had been patchy and piecemeal. Furthermore, within China, provincial authorities only report communicable disease incidents to the Ministry of Health in Beijing.

- **HWFB/DH should urgently establish better communication, coordination and collaboration with Guangdong, and with the Pearl River Delta region as a whole. This should include the following –**
  - **Developing within the Pearl River Delta region a coherent system for preparedness and response to communicable disease outbreaks**
  - **Establishing a regional communicable disease surveillance network for SARS and other infections of public health importance**
  - **Maintaining close liaison through official channels with Guangdong Health Bureau and Guangdong Centre for Disease Control and Prevention**

- **Promoting closer working relationships between professionals, academic, hospital and technical staff in Hong Kong and in the Pearl River Delta region.**

- **HWFB/DH should develop closer collaboration with the Ministry of Health, Beijing on communicable disease matters.**

9.2 The need for collaboration with the international community is also important. Hong Kong has well established communication links with the team of the Global Outbreak Alert and Response Network (GOARN), a mechanism launched by WHO to keep the international community alert to outbreaks and ready to respond. This system proved extremely effective in dealing with SARS worldwide.

- **HWFB/DH should maintain good collaboration with the WHO, and with other national communicable disease control agencies, and should establish contingency arrangements for obtaining outside expertise during public health emergencies.**

X. SURVEILLANCE, INFORMATION AND DATA MANAGEMENT

10.1 Following reports of an epidemic of atypical pneumonia in Guangdong Province in mid-February, an ad hoc surveillance system was set up by HA to report severe community-acquired pneumonia. With DH's assistance, this was extended to private hospitals. However, very little surveillance data are available from the private sector, apart from a sentinel surveillance scheme that is run with selected family doctors. Comprehensive laboratory surveillance is absent, and there is the need for laboratories to agree protocols for sharing information.

- **DH should make efforts to develop a comprehensive laboratory surveillance system for communicable diseases, to involve private hospitals in routine surveillance, and to extend the sentinel surveillance scheme in primary care.**

- **Laboratories in Government, HA and universities should agree protocols for sharing information for clinical, epidemiological and research purposes.**

10.2 At the time of the SARS epidemic, DH and HA set up separate SARS databases for public health and clinical treatment purposes. The two were unable to directly access each other's databases and, as a result, it was not possible to exchange information on suspected cases in real time. The Committee notes that HWFB, DH and HA made considerable efforts to rectify these problems within a very short period of time, through the development of the following data management systems in April –

- the **e-SARS system**, a comprehensive electronic web-based system jointly developed by HA and DH providing real-time information exchange with DH about newly admitted SARS patients, thus facilitating DH in tracing and tracking contacts

- the **SARS-Case Contact Information System** (SARS-CCIS), a data management system developed by DH with cluster analysis function for field epidemiologists to construct cluster trees and extract cases of identified clusters for analysis

- the **Major Incident Investigation and Disaster Support System** (MIIDSS), a crime investigation programme used by the Hong Kong Police Force that had been adopted to help quickly identify linkage between cases and contacts and high-risk locations of SARS occurrence to enable rapid implementation of public health measures.

10.3 The challenge is to build on the collaboration that was established between DH and HA, and DH and the Police, and to adapt these information technology developments for long-term use.

- **HWFB, DH and HA should establish an enhanced information management system across the sectors for communicable disease control on a permanent basis. This should build on the success of the e-SARS, MIIDSS, and SARS-CCIS systems and should be –**
  - ***Instant*** **- incorporating real-time linkage of relevant data between the information systems of DH and HA**
  - ***Inclusive*** **- encompassing links to all health sectors, including the private sector and community clinics**
  - ***Interactive*** **- providing regular feedback to information providers, with greater frequency and targeted content as needed.**
- **DH should formulate and promulgate a clear policy of privacy of information, that balances public and private interests, in order to instil a sense of personal responsibility and foster community confidence in the implementation of public health measures against communicable diseases.**

XI. SURGE CAPACITY

11.1 The SARS epidemic exposed substantial weaknesses in hospital design and environment. Wards are overcrowded and facilities are outdated.

11.2 At present, isolation facilities are normally in the form of a pair of isolation rooms in a standard ward, designed for episodic cases of infection and scattered in different specialty wards. With the exception of PMH, there are no designated isolation units in public hospitals. One solution to this problem is to build or designate a dedicated infectious disease hospital. However, this would contract, rather than expand, expertise in infection management and control throughout HA, exacerbate problems of transporting infectious patients, and would mean that patients would not have easy access

to specialised diagnostic and treatment facilities they may require, such as those of a renal or surgical specialty. The Committee therefore endorses Government's proposal to develop infectious disease units attached to selected acute hospitals.

11.3 The SARS epidemic exposed deficiencies in staff training and expertise in the healthcare services. They included a lack of expertise in communicable diseases, a weak infection control culture and an inadequate awareness of good infection control practices. A variety of problems were also experienced with the availability, supply and distribution of drugs and equipment, including problems in obtaining sufficient supplies of personal protection equipment initially, their distribution within HA, and the lack of supplies for family practitioners and residential care homes for the elderly in the private sector.

- **HA should prepare for future outbreaks of communicable disease by –**
  - **Improving infection control arrangements, including the designation of trained infection control personnel in each hospital**
  - **Investing in improvements to hospital facilities, including the provision of purpose-designed isolation facilities at selected acute hospitals**
  - **Strengthening expertise in relevant clinical specialties (communicable diseases in adults and children, intensive care, respiratory medicine) and in outbreak management**
  - **Extending training of staff in infection control and other shortage skills**
  - **Reviewing laboratory capacity, laboratory health and safety standards, and availability of high security laboratory facilities**
  - **Developing methods for timely and adequate access to drugs, consumables and equipment**

- Enhancing management capabilities.

- **HA should have contingency plans that cover the following –**
  - Availability of infection control facilities and expertise and microbiology laboratory support
  - Mobilisation of hospitals and service reprioritisation
  - Redeployment of workforce and other resources
  - Emergency supply arrangements for drugs, consumables and equipment
  - Lines of command for managing and implementing deployment of resources.

- **These plans should be developed in collaboration with DH/CHP.**

11.4 There were also enormous demands on the public health services. The epidemic highlighted several deficiencies in DH, including a shortage of expertise in field epidemiology and infectious disease control, inadequate system support, and insufficient public health resources to cope with a large-scale community outbreak. There is disproportionate funding for the public health services compared with the public hospital system.

- **DH/CHP should have contingency plans that cover the following –**
  - Rapid enhancement of the surveillance system
  - Information system support for contact tracing
  - Training and redeployment of staff with field epidemiology, contact tracing and outbreak control expertise
  - Extended laboratory capacity in collaboration with universities, local and international organisations
  - Availability of designated quarantine and isolation centres.

11.5 During the epidemic, skills and expertise available in the private sector were underused, and private practitioners were not fully supported by the public services. Some non-government organisations also felt that they had been left out. By contrast, organisations such as the Auxiliary Medical Service (AMS) and the Civil Aid Service (CAS) proved very useful.

- **DH/CHP and HA should hold discussions with private practitioners on their involvement at times of outbreak, including backup services to be provided by the private sector, and support services required by them.**
- **DH/CHP and HA should draw on the services of organisations such as AMS and CAS to provide backup at times of outbreaks, and also engage non-government organisations which provide essential support for patients who are chronically ill and who may be disadvantaged in epidemic situations.**

XII. CLINICAL MANAGEMENT, HOSPITAL INFECTION CONTROL AND OCCUPATIONAL HEALTH

Clinical Management

12.1 During the initial period, an Expert Panel was set up by the HA Working Group on Severe Community-Acquired Pneumonia. This focused on case definition, empirical treatment options and infection control issues. After identifying the SARS coronavirus, the focus was on diagnosis and revising treatment guidelines. The initial treatment regimen, consisting of ribavirin and steroids, was developed through observations and discussions of the patients' clinical condition on a daily basis. The efficacy of this treatment remains unclear. In early May, HA formed a multi-disciplinary SARS Collaborative Committee, whose work included developing research protocols for new treatment options.

12.2 Although much experience has been gained with a variety of treatments, evaluation has only been done so far by retrospective analysis of data on clinical outcome or by non-randomised studies.

- **HA should update, on a regular basis, treatment guidelines for SARS based on the best laboratory and clinical evidence available locally and internationally.**
- **The academic community and clinicians should agree protocols for information sharing and conducting randomised control trials before the next SARS outbreak. These should cover all aspects of the management of an outbreak, including clinical treatment, staff and patient protection (including personal protection equipment), and public health interventions. The protocols should be shared with the Pearl River Delta region.**

Hospital Infection Control

12.3 The epidemic has shown that hospital infection control standards are inadequate and there has been little appreciation previously of its importance. Good infection control arrangements require that there is an established infection control structure within each hospital with sufficient resources and clear lines of management responsibility.

- **Each hospital should have an infection control team that reports regularly to a hospital infection control committee. The team should have responsibility for –**
  - **Developing, implementing and auditing policies, procedures and guidelines on infection control**
  - **Educating, training and advising students and staff in all aspects of infection control**
  - **Carrying out surveillance of hospital-acquired infection and contributing to the surveillance of community-acquired infection**

- **Monitoring standards of hospital hygiene**
- **Assessing and managing risks in relation to hospital infection**
- **Liaising with occupational health services for staff**
- **Advising on infection control aspects of the purchase of new equipment and hospital construction projects**
- **Preparing and updating hospital outbreak plans and leading the response to hospital outbreaks**
- **Producing an annual report**
- **Working closely with DH/CHP and other hospitals.**

Occupational Health

12.4 Not only were health workers directly affected by SARS, but many experienced the trauma of seeing colleagues suffer. Most worked indefatigably in stressful and difficult circumstances, and all were exposed to the fears and anxieties of dealing with a new and unexplained disease. Nevertheless, existing occupational health services for healthcare workers are poorly developed. They generally focused on occupational safety and do not offer a comprehensive package of services that addresses both prevention and care, and provides support for the physical and psychological health of staff.

12.5 WHO has indicated that, in future, the occurrence of a cluster of atypical pneumonia in hospital staff is a sentinel event that should raise suspicion about the possibility of SARS. Health workers should, therefore, remain alert to illness in colleagues. There should be effective systems in place for reporting illness to occupational health services, and that there is close liaison between occupational health and the hospital infection control team.

- **HA should review its occupational health services and put in place a comprehensive package of occupational health services, led by professionally trained occupational health staff, which will support physical and psychological health and promote safety at work for healthcare staff.**

XIII. RESEARCH AND TRAINING

Research

13.1 Hong Kong is uniquely placed to carry out research on SARS because of the epidemic experience, the culture of research, and familiarity with the English language. Much has already been published, for which Hong Kong has gained an international reputation for scientific excellence. Ongoing research on SARS has been initiated by the universities, HA and DH, and commissioned by HWFB. The Government has established a research fund of HK$450 million to support research projects on the prevention, treatment and control of communicable diseases, in particular, emerging infectious diseases including SARS. In addition, a special allocation of HK$10 million was dedicated by the Research Grant Council to 16 urgent and important research projects to tackle some immediate problems brought about by the SARS epidemic.

13.2 There remain a number of unanswered questions on SARS that can only be addressed by further research. In order to ensure that these issues are properly and comprehensively addressed, it is important that research efforts are well coordinated. By its nature, research work tends to be highly competitive. Given the public health imperative, there is the need to replace competition with collaboration among universities.

13.3 Hong Kong is also uniquely placed to develop cross-boundary research collaborations within the Pearl River Delta region and other parts of Mainland China.

- The Government and HA should work with universities and research funding providers to ensure that research places due emphasis on public health, and that priority is given to projects that need to be undertaken urgently in order to prepare for any future outbreak of SARS.
- Further research should be conducted on –
  - Improved diagnostic techniques
  - Clinical management of SARS, including therapeutics and role of traditional Chinese medicine
  - Transmission risks of SARS
  - Most appropriate hospital infection control measures for SARS
  - Seroprevalence of SARS in defined populations and communities
  - Cost and clinical effectiveness of community infection control measures for SARS
  - Long-term consequences of SARS.
- There should be more collaboration in research among universities.
- DH, HA and the universities should establish joint academic and clinical appointments of public health staff to work across the health and healthcare system. The possibility of establishing a single academic public health institution that pools scarce expertise should also be considered.
- Cross-boundary research within the Pearl River Delta region should be actively encouraged. Advantage should be taken of the readiness of the international research community to work in collaboration with their colleagues in Hong Kong.

Training

13.4 Currently the emphasis of training in heath care is almost exclusively on clinical practice and, in general, healthcare workers receive inadequate training in infection control and public health. This is equally true in the private sector, both amongst primary care practitioners and staff of residential care homes for the elderly. The mindset of universities, training institutes and the healthcare sector needs to be changed to put more emphasis on public health, prevention and infection control. A greater commitment is needed, in terms of policy and resources, to ensure that all healthcare workers receive training in these areas.

13.5 Even in the public health service, there is a huge deficit of field epidemiology and infectious disease control experience, and relatively few fully trained and accredited public health physicians. To address this, a sustained programme of training in field epidemiology needs to be rapidly introduced. There is also scope for developing greater collaboration with professional colleagues elsewhere in China.

- **The Government, HA, universities, training institutes, and private sector employers should ensure that all healthcare workers get basic and ongoing training in infection control and have an understanding of fundamental epidemiology and public health principles.**
- **HA should rapidly address the skills shortages in clinical infectious diseases and critical care medicine.**
- **The Government should give a policy commitment to public health training and ensure that priority is accorded in the allocation of resources.**
- **The Government should consider establishing a Hong Kong field epidemiology training programme (FETP) as a means of rapidly establishing a cadre of specially trained infectious disease epidemiologists. Public health training collaborations with Mainland China should also be explored.**

XIV. COMMUNICATIONS

14.1 Communication with the public must be seen as a component of public health effort, just as epidemiology, health promotion and health education are. This aspect of communication in the early stages of the outbreak was not very satisfactory, reflecting a lack of preparedness. However, WHO has praised Hong Kong on a number of occasions for openness and transparency in managing the SARS epidemic.

14.2 A more sophisticated communication strategy is needed as part of an overall outbreak management plan. It needs to take account of a variety of potential circumstances, to include risk assessment and risk communication, and to be coherent and properly coordinated.

- **DH/CHP should be given overall responsibility for devising a communication strategy (including risk communication) for communicable disease outbreaks. The strategy should –**
  - **Include communication with the general public, and across the public and private healthcare sectors**
  - **Match the purpose, the message, the medium and the audience**
  - **Use multiple modes of communication, including press conferences, helplines and websites, and mass publicity campaigns**
  - **Ensure that spokespersons are appropriately trained in media skills, particularly in how best to communicate risk and uncertainty. External consultancy to support this development should be considered.**

- **HA should develop policies for communicating with the media that includes coordination with DH, and details of the respective responsibilities of HA head office and individual hospitals, taking into account matters such as work priorities and the level of information available at HA head office and hospitals.**

- **The Government should develop partnerships with the media through regular contact, communicable disease training initiatives, and other means.**

14.3 HA made great efforts to communicate with staff, but the level of staff anxiety suggests more needed to be done. Mechanisms for the dissemination of information and advice to staff do not appear to have kept pace with the rapid development of the SARS epidemic. Over-reliance on posting information on the intranet may exclude some groups of staff. With visits to hospitals prohibited or restricted, the lack of communication between patients and their families was another source of great anxiety. Innovative measures were devised in some instances, but future plans will need to anticipate this problem and devise ways of dealing with it.

- **HA should develop a communication strategy for its staff, that includes face-to-face communication such as hospital-based conferences, and avoids over-reliance on posting information on the intranet, which may exclude some groups of staff.**

- **Hospitals should review procedures for communicating with patients and their families during a major outbreak, including the use of information and video technology when patients are in isolation.**

XV. ENGAGING THE COMMUNITY

15.1 There was naturally a great deal of anxiety in the community during the SARS epidemic. People were concerned not only about their health and the possibility of infection, but were also anxious to do what they could in combating the disease, preventing its spread, and lending a helping hand to those in need. The ability to harness the vast amount of energy that is associated with this anxiety will go a long way in engaging the community in terms of providing constructive support for managing the crisis.

15.2 In keeping with the population-based approach to health protection, what is required is flexible and coordinated response to the needs of different sectors of the population, particularly vulnerable groups. There is also the need to engage the community in health promotion activities and health campaigns. A long-term contingency fund for public relief supported by contributions from the Government and the community should also be considered.

15.3 Apart from involving the general community, there is also the need to engage various sectors, such as the health and allied sectors, non-government and district organisations, the academic sector, professional groups, the private medical sector and the voluntary sector. The business community should also be engaged.

15.4 As regards vulnerable groups in the population - eg the elderly in residential care homes, chronically ill patients, school children - particular attention should be paid in two respects. First, a surveillance system is needed that is sensitive enough to provide early detection of threats to public health among these groups. Second, special care must be provided for the needs of these groups.

15.5 As community feedback is an essential element in implementing population-based health protection, DH should consider how regular surveys should be conducted.

- **A population-based framework should be devised for times of outbreak –**
  - **To coordinate services across all sectors, (hospital, public health and social services) taking particular account of the vulnerable populations**
  - **To fully utilise the skills of nurses and other healthcare professionals in caring for the needs of vulnerable groups (children, elderly and chronically ill patients) and in sentinel surveillance**
  - **To involve private practitioners in providing services**
  - **To involve the voluntary sector, organisations such as AMS and CAS and non-government organisations in providing care not only for those who are affected, but also for those who are chronically ill**
  - **To engage the community in health promotion activities and health campaigns.**
- **DH should conduct regular surveys to obtain community feedback on public health issues.**
- **A contingency fund for public relief supported by contributions from the Government and the community should be considered.**

15.6 Probably the group most vulnerable to infection are older people living in residential care homes. Residential care homes for the elderly generally do not have well developed infection control policies and the training in infection control for staff is inadequate. Isolation facilities in these homes are also inadequate.

- **Infection control arrangements in residential care homes for the elderly, including infection control training for staff and improving isolation facilities, should be strengthened.**

XVI. THE IMPACT AND AFTER-EFFECTS OF SARS ON THE COMMUNITY

16.1 The after-effects of SARS will be felt for a long time to come. Most painful will be its effect on the families of the deceased. The Committee extends its sympathies to those who have lost loved ones as a result of SARS.

16.2 Now that the epidemic is over, it is important not to forget the continuing needs of the large numbers of people who have been affected by it. There will be a role for both the public sector and non-government organisations. There should also be a careful assessment of the rehabilitation of people covering from SARS. There were reports of discrimination against SARS patients and their families, and the elderly because of SARS cases with cryptic presentation among them. A survey by the Equal Opportunities Commission revealed 'that unnecessary fears and concerns could be eased as more factual and reasonable information became available, improving discriminatory attitudes as a result'. The issue of discrimination should be looked into to ensure that those affected receive the community support which they need.

- **HA should assess the medical and psycho-social needs of recovered SARS patients and develop a programme to cater for their needs.**
- **Social Welfare Department should assess the needs of the families of deceased SARS patients and offer follow-up support as appropriate.**
- **A study should be undertaken to assess the extent and impact of discrimination against former SARS patients, their families and contacts. Appropriate support for those discriminated against should be considered.**