CONCLUSIONS AND RECOMMENDATIONS

XVII. CONCLUSIONS

17.1 The Committee has studied the chronology of events during the SARS epidemic in Hong Kong in considerable detail, and heard a great deal of evidence from a wide variety of individuals and organisations. The story that emerges is one of great courage and dignity as Hong Kong struggled against this new disease. There were criticisms too. The Committee has therefore carefully reviewed several specific areas. These include early events in Guangdong Province and Hong Kong, early perceptions of whether a community outbreak was occurring, the handling of the PWH and Amoy Gardens outbreaks, public and private sector collaboration, and the apparently high case fatality rate from SARS in Hong Kong.

17.2 Overall, the epidemic in Hong Kong was handled well, although there were clearly significant shortcomings of system performance during the early phase when little was known about the disease and its cause. The Committee has not found any individual deemed to be culpable of negligence, lack of diligence or maladministration.

17.3 The SARS experience has helped to identify a number of positive lessons as well as highlighting a number of challenges for future preparedness. The underlying concept is resilience, ie the ability at every level of the system to detect, prevent, control and recover from disruptive challenges. It depends on having a well planned, carefully orchestrated and fully integrated emergency management response. A Centre for Health Protection should be established with responsibility, authority and accountability for the prevention and control of communicable diseases.

17.4 There needs to be a high level of vigilance and alertness throughout all parts of the health system. This requires a culture where everyone recognises that their work, whether in primary care or hospital care, may have wider public health implications, and that an illness in one patient may have consequences for the whole community. Strengthening surveillance is

an urgent priority. While noting the success of e-SARS and MIIDSS developed during the epidemic, it should be pointed out that investment should be made in order that DH/CHP will have better information technology support to refine and develop robust systems for the future. An important gap in the system is the absence of comprehensive laboratory surveillance. Efforts should be made to ensure that all laboratories promptly and routinely report all laboratory diagnoses of public health importance to DH/CHP. A more fundamental reform would be to integrate all hospital microbiology laboratories within the new Centre for Health Protection.

17.5 Contingency planning is the basis for dealing with most health service and public health emergencies, including communicable disease outbreaks. It should be a requirement that DH and HA, and each regional office, cluster and hospital should develop and implement an incident plan, that includes arrangements for dealing with major outbreaks. Plans should be regularly tested and communicable disease outbreaks should be viewed as an integral part of contingency planning. There is also a need for site-specific plans, event or scenario specific plans, and plans that take account of the increasingly international dimension of public health incidents. Similar plans and arrangements should exist in the private sector and in other support agencies and organisations.

17.6 The effective management of a public health emergency requires a clear chain of command. Various mechanisms and bodies were established on an ad hoc basis in response to the SARS epidemic. These arrangements need to be clarified and formalised in preparation for any future emergency. A framework of command is needed to manage the response at one or more of three levels: operational, tactical and strategic. Command and control arrangements need to reflect the fact that the chain of control is normally activated from the bottom upwards. A suitable legislative framework is also needed to enable an appropriate public health response.

17.7 In order to devise an integrated response, the relationships of various organisations at every level of the health system need to be reviewed. Furthermore, planning cannot be carried out in isolation, but must involve close collaboration with neighbours in the Pearl River Delta region, Mainland China generally, and the international community as a whole.

17.8 Inadequate surge capacity in hospitals and the public health system has clearly been a major problem with SARS. HA needs to urgently invest in improvements to hospital facilities, especially isolation rooms, and to review shortages in some clinical skills and specialty areas and make plans to redress them. It should also develop detailed plans on how resources will be shared to deal with an incident that overwhelms the capacity of any one part of the health system. Establishing a Centre for Health Protection will deal with many of the shortcomings in public health resources, particularly the need for more trained infectious disease epidemiologists and public health specialists which is critical.

17.9 It has been said that the fear of SARS spread faster than the virus itself. Unwarranted discrimination was another unfortunate problem. Communicating risk to the public is never easy, particularly in the face of an overwhelming crisis. It is important to build a level of trust within the community by ensuring that professionals with appropriate expertise and seniority are properly trained in working with the media, that longer-term partnerships are built with the media and that they are involved in the contingency planning process, and that there is an ongoing programme of public education on public health issues.

17.10 Finally, we wish to commend the people of Hong Kong once again for the courage and dignity that they have shown during the SARS epidemic, and express our sympathy for those who have suffered from the epidemic.

XVIII. MAIN RECOMMENDATIONS

Organisation of health and healthcare system for the control of an outbreak of communicable disease

1. The organisational structure and the relationship between the Health, Welfare and Food Bureau (HWFB) and the constituent Government Departments under the Bureau in the areas of health, social welfare and food should be reviewed. Consideration should be given to merging the functions of separate departments within the Bureau, headed by the Secretary for Health, Welfare and Food (SHWF), in order to improve the capacity for coordination across the Departments and to facilitate policy-making and commissioning for health protection matters. (See para 6.1)

2. The Government should establish a Centre for Health Protection (CHP), which would have the responsibility, authority and accountability for the prevention and control of communicable diseases. As it develops, this centre would also have the responsibility to advise on all aspects of health protection, including food safety and hygiene, veterinary issues, non-communicable diseases and their risk factors, etc. It would also be responsible for maintaining close working relationships with the main international agencies. (See para 7.1)

3. 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 the Department of Health (DH) and the Hospital Authority (HA) and the private sector are all in place. (See para 6.1)

4. HA has just taken over responsibility for some primary care services formerly provided by DH. In the light of this, consideration should be given to changing the name of HA, eg to the Health Services Authority, in order to reflect its wider responsibilities. (See para 6.5)

Health protection functions

5. CHP should engage in routine surveillance, preparatory response and training with a clear understanding of the functions and skills needed across the healthcare system. (See para 7.1)

6. CHP should ensure there is an adequate infectious disease control system with the following functions: surveillance system, analytic capacity, investigative capacity, training and applied research capacity, surge capacity, health education and evaluation and backup with appropriate statutory powers. (See para 7.1)

7. The Government should ensure that a major outbreak control plan is in place with scenario planning and table-top exercises as appropriate. The control plan should be across the system and include hospitals, regional and cluster level, private and voluntary sectors, and the business sector and territory wide organisations with the following elements in it – (See para 8.2)

   (a) Inclusion of generic plan, site-specific plan and an event-specific plan as well as the international dimensions

   (b) Population-based perspective

   (c) Integrated command management structure

   (d) Infection control team with flexibility in mobilisation of the appropriate expertise

   (e) Information flow, contact tracing, patient management and staff training

   (f) A mechanism for working out research priorities.

8. The adequacy of existing legislation should be reviewed to underpin both public and private sectors, ensuring that there is cooperation and coordination and common purpose in dealing with threat of infectious diseases. (See para 7.2)

Collaboration within the Pearl River Delta region and with the international community

9. Regular data reporting systems and robust collaboration on surveillance need to be developed within the Pearl River Delta region. (See para 9.1)

10. The capacity to establish links and networks and to promote exchanges of professionals, academic, hospital and technical staff between Hong Kong and the Pearl River Delta region in the Guangdong Province needs to be enhanced. (See para 9.1)

11. HWFB/DH/CHP should establish contingent plans and relations with organisations and individuals with outbreak control experience and with capacity to pull together a team of expertise (World Health Organization/ Centers for Disease Control and Prevention in USA/Health Protection Agency in UK). They can then be called upon to help at times of an outbreak. They should be involved now in the preparation of contingency plans and be familiar with Hong Kong's system. (See para 9.2)

Coordination within Hong Kong

12. The working relationships between DH and HA and the private sector, universities and primary care need to be improved. In particular – (See para 8.4)

    (a) Clinical infection control and epidemiological experts should be based in every major hospital, working as employees of DH seconded to HA. These individuals would have responsibility for hospital infection control, pertinent data collection and reporting, and regular liaison between colleagues in HA and DH

    (b) Staff should be encouraged to rotate through the different systems including DH, HA and the universities as appropriate

(c) Resources (staff and funding) should be brought together to deal with a future outbreak on a population basis

(d) 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.

13. The role of the private sector for disease surveillance should be enhanced by - (See para 8.5)

(a) Making the "Visiting Medical Officer" (VMO) scheme permanent to provide support and care to the elderly in residential care homes and to assist in disease surveillance

(b) Involving family medicine and traditional Chinese medicine (TCM) practitioners in sentinel surveillance

(c) Exploring the development of a web-based system for electronic notification by private practitioners and providing regular updates of surveillance results to private practitioners.

14. Laboratories in Government, HA and universities should share information for clinical, epidemiological and research purposes - (See para 10.1)

(a) To initiate discussion and reach agreement as far as possible on a set of protocol arrangements amongst laboratories

(b) To enable contingency planning on operating procedures including health safety issue to limit spread amongst laboratory workers, and backup arrangement with overseas laboratories.

15. Discussions leading to agreements as far as possible should be initiated amongst the clinical academic community on randomised control trials (RCTs), protocols and information sharing before the next outbreak. This should cover all aspects of the management of an epidemic, including clinical treatment, staff and patient protection, including personal protection equipment (PPE). These discussions should embrace public health research across all sectors. (See para 12.2)

The management of an epidemic, including surge capacity

16. The surge capacity should be reviewed, and where appropriate preparedness enhanced in the following areas – (See paras 11.3 - 11.4)

    (a) Hospital: intensive care unit beds, adequate staffing for such beds including the provision of specialised respiratory intensive care facilities as appropriate, hospital ventilation, isolation facilities, including where appropriate provision of negative pressure rooms. The advisability of designating one acute hospital in each cluster for the primary reception of SARS patients and other infectious disease patients should be considered. Such a hospital will need to have adequate intensive care facilities, including access to specialised respiratory intensive care advice. The appropriate arrangements for step down wards or other facilities within each cluster need to be determined

    (b) Public health: laboratory capacity, epidemiology, surveillance and infectious disease control, contact tracing and quarantine and isolation centres

    (c) Supplies: drugs, vaccines, PPE etc.

17. Discussions should be held with private practitioners on their involvement at times of outbreak, including backup services to be provided by the private sector, support services required by them, and roles and responsibilities. (See para 11.5)

18. The services of the voluntary sector, organisations such as Auxiliary Medical Service (AMS), Civil Aid Service (CAS) and non-government organisations, should be drawn on to provide backup services at times of outbreak. (See para 11.5)

19. 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, the Head of CHP 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/CHP in all aspects of epidemiological management, including surveillance and contact tracing, need to be clearly understood and adhered to by all parties. (See para 6.2)

20. Clear policies for isolation and the period of quarantine for both affected individuals and their contacts in hospital and the community need to be established. (See para 8.2)

21. Contingency plans should be established to take account of the possibility that people whose roles are important in the management of an epidemic may themselves become victims. Nominated and trained deputies should be clearly identifiable for each of these key positions. (See para 8.2.)

22. HA needs to develop clarity over the role of its own Board during the management of an epidemic or 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. (See para 6.5)

Communications

23. The overall responsibility for devising a communications strategy in advance of a communicable disease outbreak should be given to DH/CHP. (See para 14.2)

24. In times of epidemic the public need to be kept informed. Capacity to communicate effectively and regularly must be described, available and understood. (See para 14.2)

25. DH/CHP should be responsible for the coordination and implementation of the communications strategy. They need to match the purpose, the message, the medium and the audience and to use multiple modes of communication. (See para 14.2)

26. DH/CHP should ensure adequate training is provided. This should include special training on how best to communicate risk and uncertainty. External consultancy to support this development should be considered. (See para 14.2)

27. HA should develop policies for communicating with the media that includes coordination with DH, and details of 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. (See para 14.2)

28. HA should develop a communications strategy for its staff, which includes face-to-face communication and avoids over-reliance on posting information on the intranet, which may exclude some groups of staff. (See para 14.3)

29. HA should make use of information and video technology to facilitate communication between patients and their families during isolation. (See para 14.3)

30. The Government should develop partnerships with the media through regular contact, communicable disease training initiatives, and other means. (See para 14.2)

Surveillance, information and data management

31. The enhanced data management system (comprising e-SARS, MIIDSS, and SARS-CCIS) should be made a permanent part of the infrastructure to support the control of communicable diseases. (See para 10.3)

32. The enhanced data management system should be extended to link up with other sectors, including the private sector and community clinics. (See para 10.3)

33. DH should formulate and promulgate a clear policy of privacy of information that balances public and private interests. (See para 10.3)

Clinical practice

34. HA should update, on a regular basis, treatment guidelines based on the best laboratory and clinical evidence available locally and overseas. (See para 12.2)

Research and training

35. 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. (See para 13.3)

36. Further research should be conducted on – (See para 13.3)

    (a) Improved diagnostic techniques

    (b) Clinical management of SARS, including therapeutics and role of traditional Chinese medicine

    (c) Transmission risks of SARS

    (d) Most appropriate hospital infection control measures for SARS

    (e) Seroprevalence of SARS in defined populations and communities

    (f) Cost and clinical effectiveness of community infection control measures for SARS

    (g) Long-term consequences of SARS.

37. 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. (See para 13.3)

38. The Government should give a policy commitment to public health training and ensure that priority is accorded in allocation of resources. (See para 13.5)

39. 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. (See para 13.5)

40. DH, HA and the universities should establish joint academic and clinical appointments of public health staff to work across the health and healthcare system. (See para 13.3)

Engaging the community

41. A population-based framework should be devised for times of outbreak – (See para 15.5)

    (a) To coordinate services across all sectors (hospital, public health and social services), taking particular account of the vulnerable populations

    (b) 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

    (c) To involve private practitioners in providing services

    (d) 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

    (e) To engage the community in health promotion activities and health campaigns.

42. A contingency fund for public relief supported by contributions from the Government and the community should be considered. (See para 15.5)

Occupational health

43. 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. (See para 12.5)

Post-SARS environment and its impact

44. HA should assess the medical and psychological needs of recovered SARS patients and develop a programme to cater for their needs. (See para 16.2)

45. Social Welfare Department should assess the needs of the families of deceased SARS patients and offer follow-up support as appropriate. (See para 16.2)

46. 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. (See para 16.2)