

Presentation to the SARS Expert Committee

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Chief Executive
Hospital Authority
7 July 2003



Role of the Hospital Authority

- Advising the Government on the needs of the public for hospital services and of the resources to meet those needs
- Managing and developing the public hospital system
- Recommending to the Secretary for Health, Welfare and Food appropriate policies on fees for the use of hospital services by the public
- Establishing public hospitals
- Promoting, assisting and taking part in education and training of persons involved in hospital services or related services

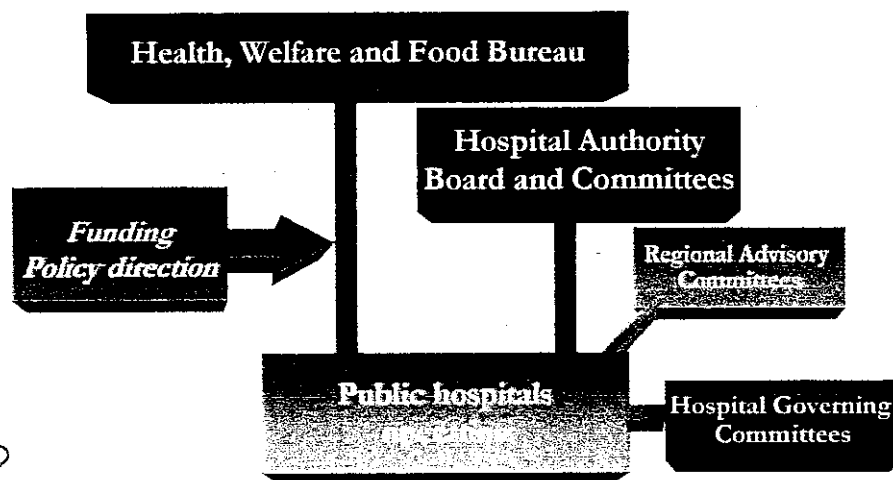


Facts and Statistics (02/03)

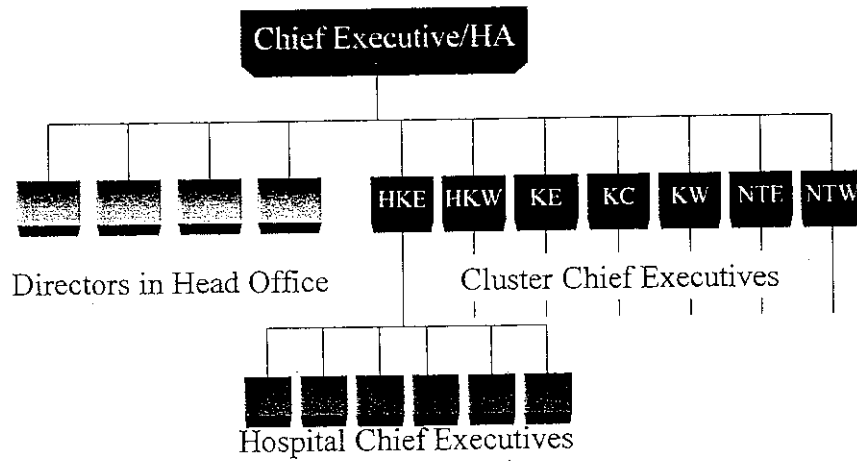
- Manages 43 public hospitals/institutions
- 29,288 hospital beds
- 53,000 staff
- Recurrent budget HK\$29.2B
- 93.7 of total bed days in Hong Kong
- 1.2 million inpatients and day patients
10.1 million outpatients
2.3 million A&E attendances



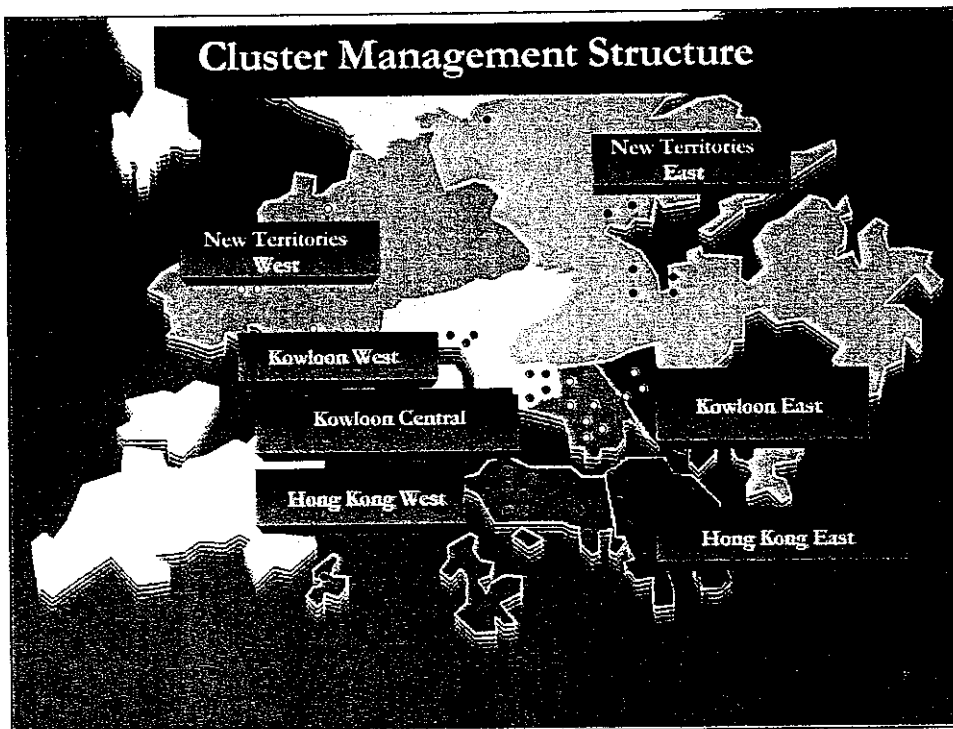
Governance Structure



Executive Structure




Cluster Management Structure





Characteristics

- Single management with features of decentralization
- Involving clinician input in decision making
- Evolving cluster management and service rationalization
- Unified IT platform for data and knowledge management



Organizational Challenges

- Separated from public health and primary care
- Interface issues with private sector and welfare sector
- Financial and human resource realities
- Internal and external communication challenges





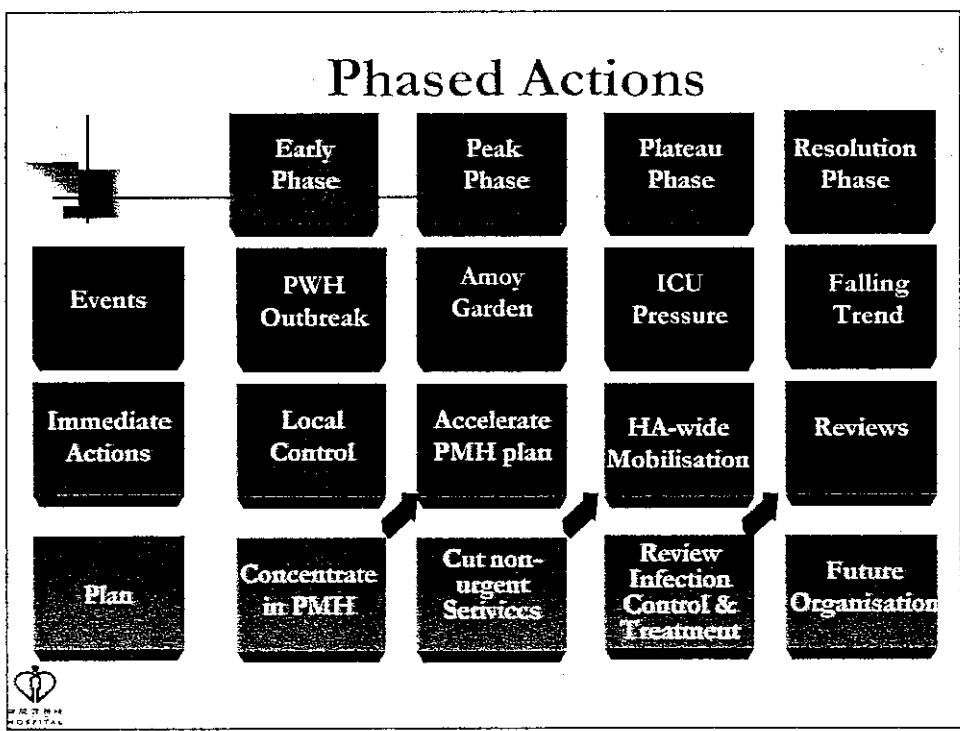
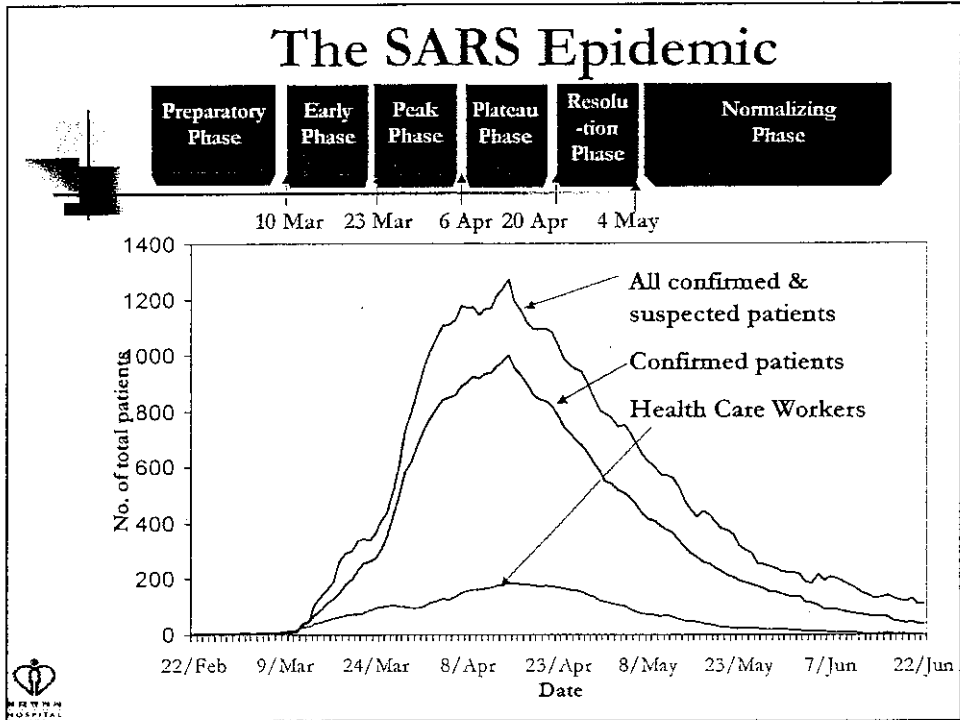
Infection Control Framework

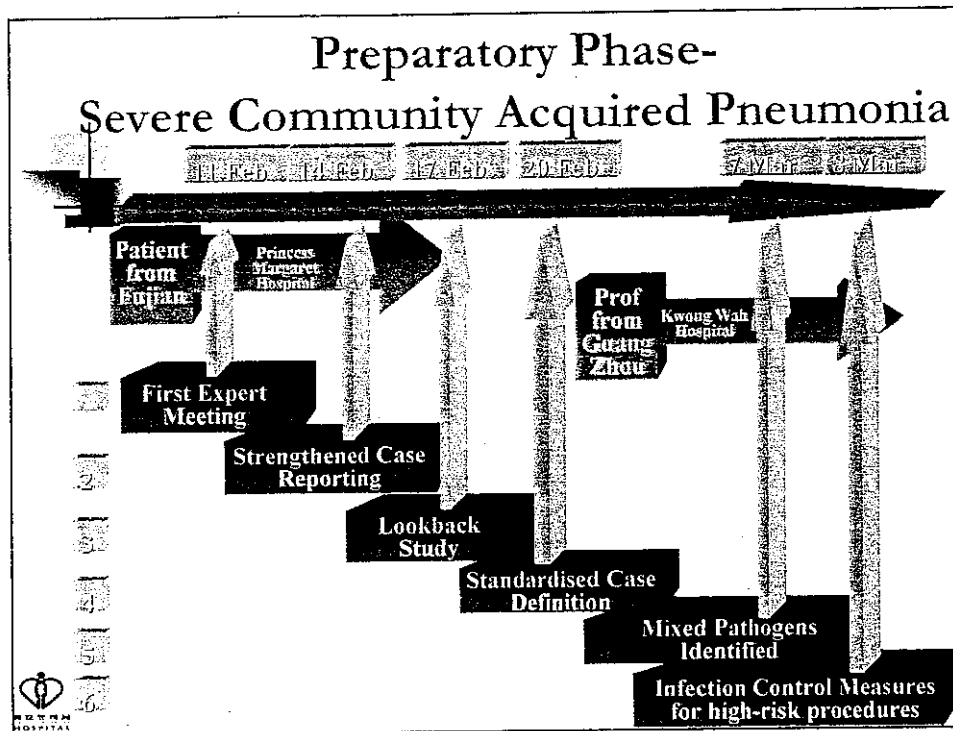
- Reporting / liaison with Department of Health
- Designated Infectious Disease Unit in Princess Margaret Hospital
- Standing Central Task Force in Infection Control
- Hospital IC network and Link Nurse System
- Quality parameters and internal audit on IC



Battling SARS Chronology

- Feb 11 – Mar 9 : Preparatory phase
- Mar 10 – Mar 23 : Early Phase
- Mar 24 – Apr 6 : Peak phase
- Apr 7 – Apr 20 : Plateau phase
- Apr 21 – May 4 : Resolution phase
- May 5 onwards : Normalizing phase





Outbreak of Crisis – Early Phase

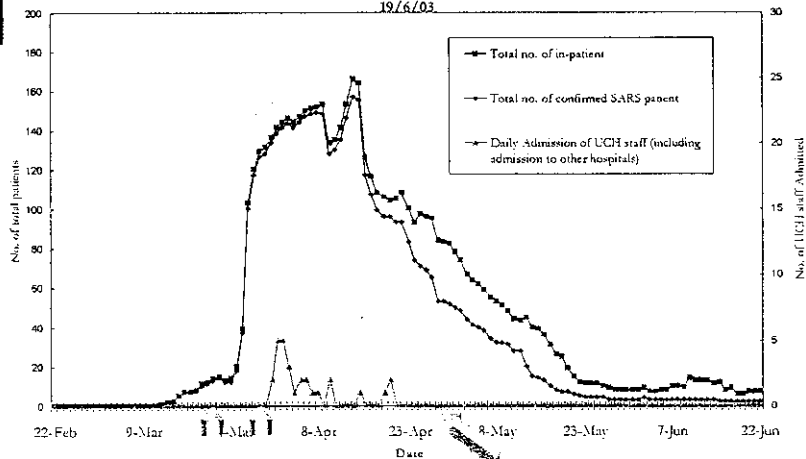
10.3.03	PWH management notified of 11 sick staff in ward 8A Ward closed to admissions
12.3.03	WHO global alert on SCAP Disease Control Centre in PWH Segregation of clean and dirty teams
13.3.03	PWH index case identified, beginning of A&E diversion PYNEH notified outbreak in HCW
14.3.03	6 th meeting of HA WG – treatment and guidelines HAHO Coordination Centre set up 1 st meeting of HWFB Taskforce
15.3.03	WHO defined SARS
16.3.03	Divert medical emergencies from PWH to other hospitals

Early Phase (Cont.)

17.3.03	Daily HAHO meetings started 1 st private hospital affected
18.3.03	CE and PWH management decided on AED closure
19.3.03	HA Guideline on management of SARS SARS webpage commenced
20.3.03	Concern on community spread in NTE
21.3.03	Information to private doctors HA SARS Coordination Centre set up
22.3.03	Identification of Corona virus
23.3.03	CE / HA admitted for SARS

Amoy, the Tornado- UCH

UCH - no. of staying in-patient & infected HCW (by date of admission) from 22/2/03 to 19/6/03



24 Mar: 1st case from Amoy Garden admitted

29 Mar: PMH received all SARS admissions

28 Apr: UCH resumed taking SARS admissions



Peak Phase of Outbreak

24.3.03	1 st admission of Amoy Gardens HA reported use of Ribvirin and steroid to HWFB Task Force
26.3.03	UCH reported outbreak to DH Plan for designating PMH as SARS hospital and decanting Staff deployment and training plan Plan for quarters for staff
27.3.03	Suspend all non-urgent services Stop visiting to SARS and triage wards

Peak Phase (Cont.)

29.3.03	Business Support Services Command Centre commenced PMH closed AED and started admitting SARS patients from all hospitals
31.3.03	Daily "Batling SARS Update" began Daily infection control training courses
1.4.03	AHNH outbreak Policy on staff leave & pregnant staff
2.4.03	No visiting policy to all acute wards Open recruitment of HCW UCH outbreak from unsuspected patient

Battling SARS Update



分擔壓力

再請遷院病人



繼前天調動人手增援瑪嘉烈醫院後，今晨指揮大會再決定將一些該院 SARS 病人調往其他各大醫院 (聯合醫院除外)，以減低該院的病人數目和員工的工作壓力。有關人數及詳情將由各區聯網總監商定。



<http://www.hk.org.hk/sars>

14/4/2003
(星期一)

BATTLING SARS UPDATE
MONDAY 14.04.2003

EASING OFF PRESSURE
FURTHER RELOCATION OF PMH PATIENTS

English
Version

指揮中心

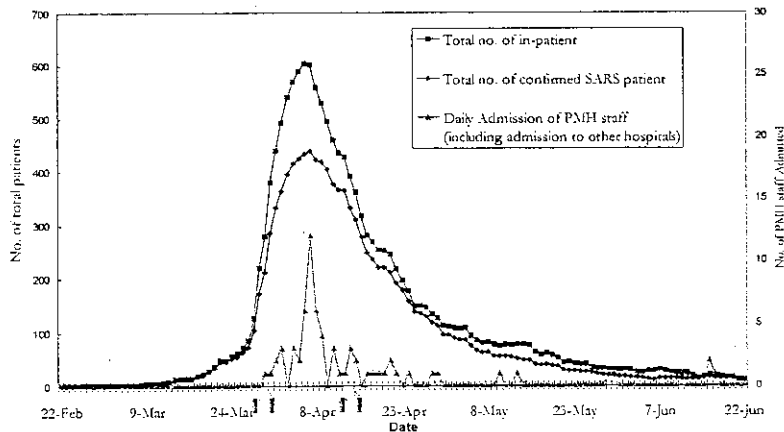
In addition to diverting further inpatient on support PMH on the day before next admission had been made this a.m. 10 hours for some of the heaviest SARS patients to other major hospitals except UCH in order to reduce the strain to staff and ease patient discomfort. The number of patients who could be moved were to be determined by CCES on mutual agreement.

密接者、代價或出院及所有聯網總監再議七區都在早上八時會面



Peak Phase - PMH

PMH - no. of staying in-patients & infected HCW (by date of admission) from 22/2/03 to 19/6/03



29 Mar. AED closed & received all SARS admissions

10 Apr. received admissions from AED/ YCH & staff Clinics only



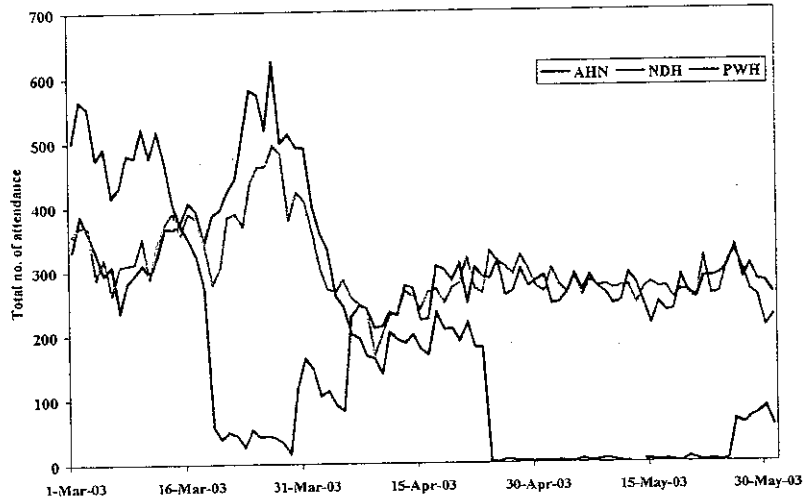
Peak Phase (Cont.)

4.4.03	ICU reinforcement to PMH
5.4.03	Total SARS patients in PMH reached 439 PMH ICU core team infected
6.4.03	PWH AED resumed to relieve AHNH UCH AED stopped medical admissions PPE standards and requirement projections defined

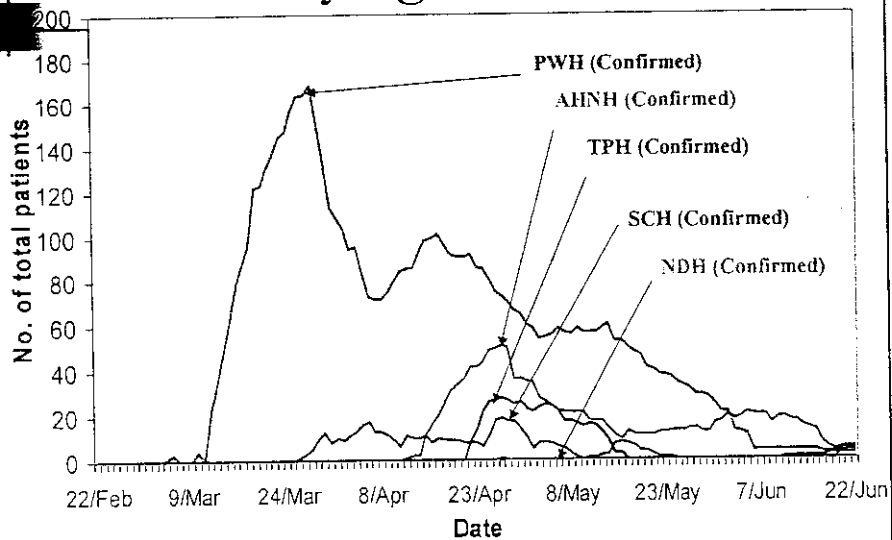
Plateau Phase

8.4.03	Total of 130 staff deployed to PMH ICU eSARS launched 30,000 VCDs on Infection Control Precautions released
9.4.03	PYNEH notified outbreak in Koway Court
10.4.03	WTSH started receiving SARS convalescent patients
11.4.03	PMH stopped all admissions
14.4.03	UCH resumed non-SARS admissions

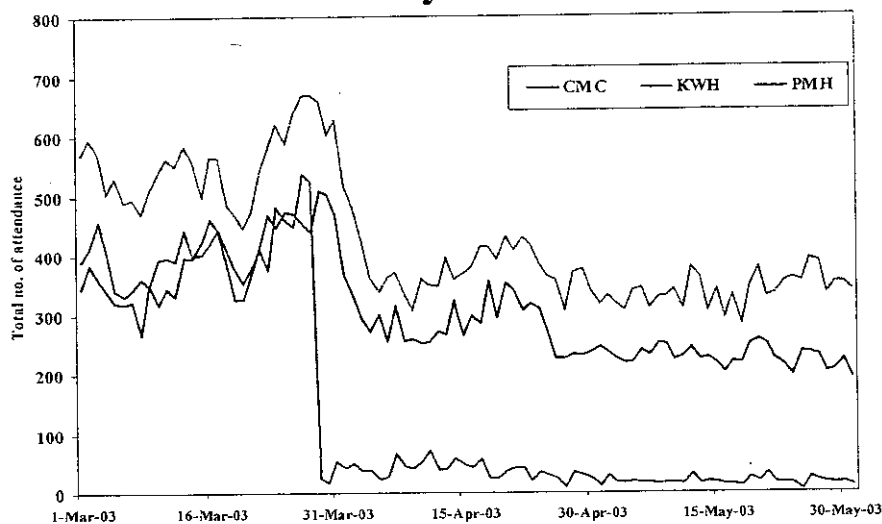
New Territories East Cluster- A&E Daily Attendances



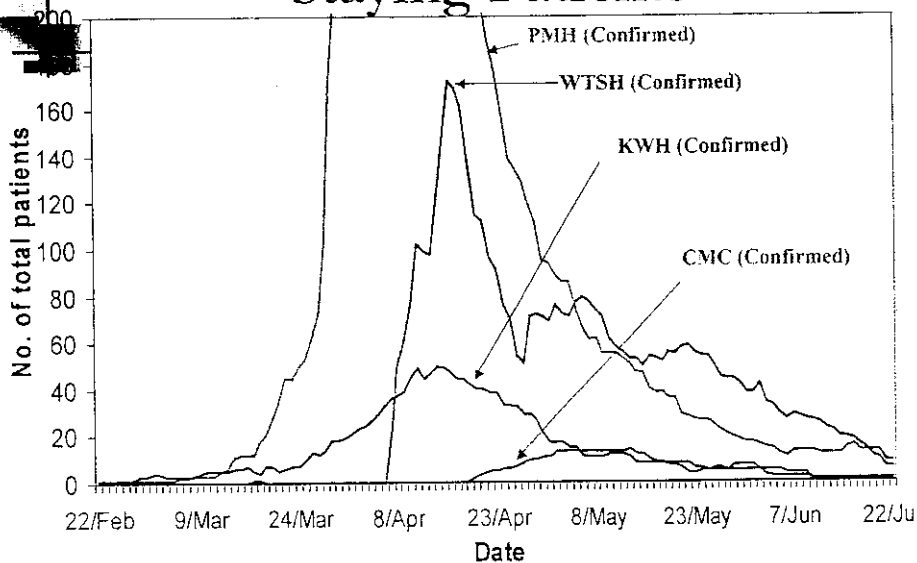
New Territories East Cluster- Staying Patients



Kowloon West Cluster – A&E Daily Attendances



Kowloon West Cluster- Staying Patients



Resolution Phase

21.4.03	"Oasis" hotline for staff psychological support
22.4.03	CE/HKSAR visit to HAHO
23.4.03	SETW visit to PWH for environmental improvement AHNH closed AED CMC outbreak
24.4.03	Baptist Hospital outbreak
26.4.03	First death of HA HCW HA Board established Task Force on SARS Special grant to family of deceased staff from SARS at work

Resolution Phase (Cont.)

27.4.03	TMH outbreak
28.4.03	Strengthen CGAT support to OAHs
30.4.03	CE / HA resumed duty 24 hour Internal Staff Hotline
2.5.03	1 st HA Board Task Force meeting 3 executive task forces on Infection Control, Supplies and Environmental Control, and Medical Therapy
3.5.03	CE/HKSAR visit to HA Expert Panel 2 TCM professors from China arrived

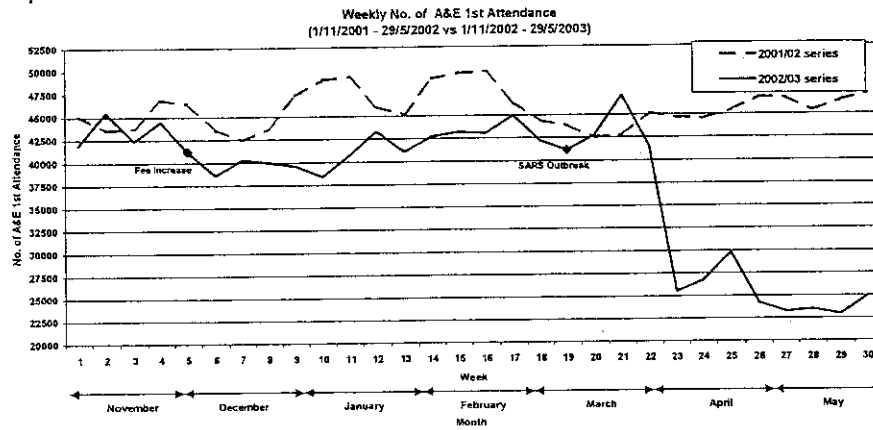
Normalizing Phase

4.5.03	Malaysian ship crew arrived
6.5.03	2 nd HA Board Task Force meeting Start of a series of audit visits to hospitals by Board members and executives
12.5.03	Start of a series of environmental control visits by SETW Invitation to GPs as Honorary VMO
19.5.03	Commencement of VMO Collaboration Project in OAHs
20.5.03	Set up data bank linking clinical, laboratory and epidemiology data on SARS

Normalizing Phase (Cont.)

24.5.03	NDH outbreak from unsuspected patients diagnosed after death
29.5.03	Guangdong / Macau / Hong Kong SARS Expert Group meeting in Hong Kong
9.6.03	HA Review Panel on SARS outbreak commenced work
13.6.03	WHO SARS Clinical Management Workshop in Hong Kong
17.6.03	WHO Global Conference on SARS in Kuala Lumpur

A&E Attendances 01/02 vs 02/03



Organisation for Crisis

Administration

Public

Patients

Staff

HA Head Office

External Interface

Advisory Groups

Internal Interface

- Regional Coordinator
- Emergency Logistics
- Private Sector
- Family Medicine
- Community Geriatrics

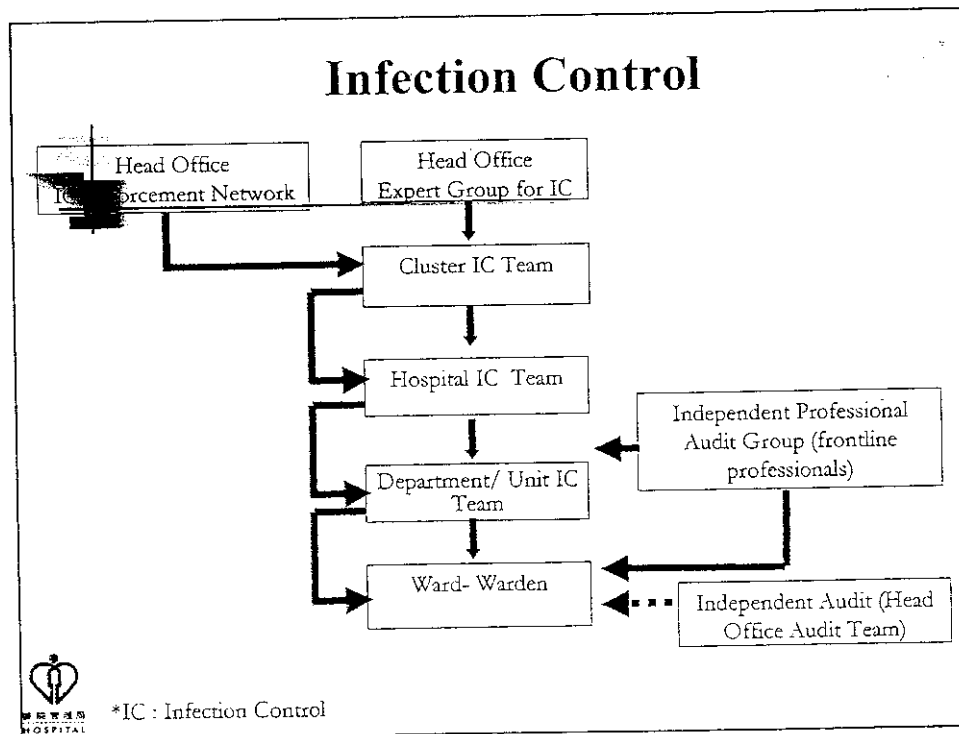
- Laboratory Diagnosis
- Radiological Diagnosis
- Treatment
- Paediatrics
- Obstetrics
- Exploratory Treatment
- Chinese Medicine

- Operation
- Data Collection
- Infection Control
- Facilities, Equipment & Supplies
- Human Resources
- Communication



Management Strategy – 3 Pronged Approach

- To contain transmission
- To protect staff from infection
- To enhance patient outcome





Containment of Transmission

- Contact tracing
- E-SARS
- Training & information for private sector:
SARS web site
- Stepped-up surveillance for elderly homes:
CGAT & VMOs.



Protection of Staff from Infection

- Hospital-based Infection Control Network
- Infection control guidelines
- Battling SARS Update
- Appropriate & effective PPE
- Education on infection control precautions
- Environmental measures



HCW Infections

Factors

1. PPE supplies and distribution
2. Infection control: training, protocols, compliance
3. Work factors: workload, high risk procedures, emergency situations
4. Patient factors: cryptic presentation, dementia, super-spreader, aerosols
5. Environmental factors: ventilation, overcrowding, excreta disposal



PPE Considerations

- Uncertain disease transmission route
- Dearth of literature on PPE in IC
- Expert consensus: the lack of
- Professional culture: clinical autonomy, learning rather than following directive
- Science Vs staff sentiment and morale
- Balancing risks



PPE Considerations

- Other authorities: CDC, WHO
- Infection control Vs occupational safety and liabilities
- Communication simplicity Vs regional differences in work practice
- Political reality
- Supplies reality



PPE Considerations

Illustrative Examples

- Surgical mask Vs N95
- Glove or no glove
- Water repellent Vs – resistant gowns
- Fit test Vs fit check
- Standard for high risk procedures

External Communication

- Press releases & interviews
- Media briefing (editors, columnists)
- Active communication (Radio & TV programs, feature articles)
- LegCo, District Councils
- Community forum, talks, exhibitions

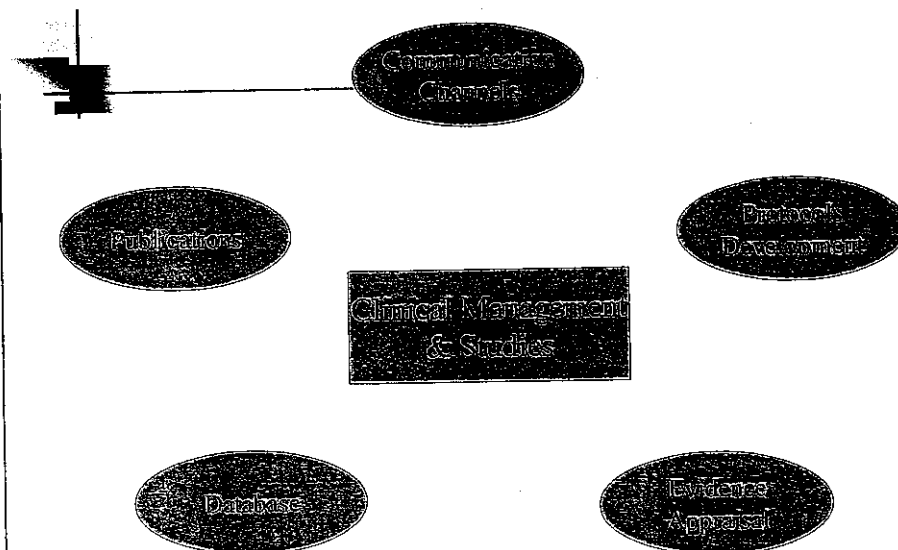
Communication Limitations

- New disease
- Complex & uncertain facts
- Rapidly changing scenario
- Operational priorities
- Staff sentiments (science vs emotion)
- Stake holders with different interest

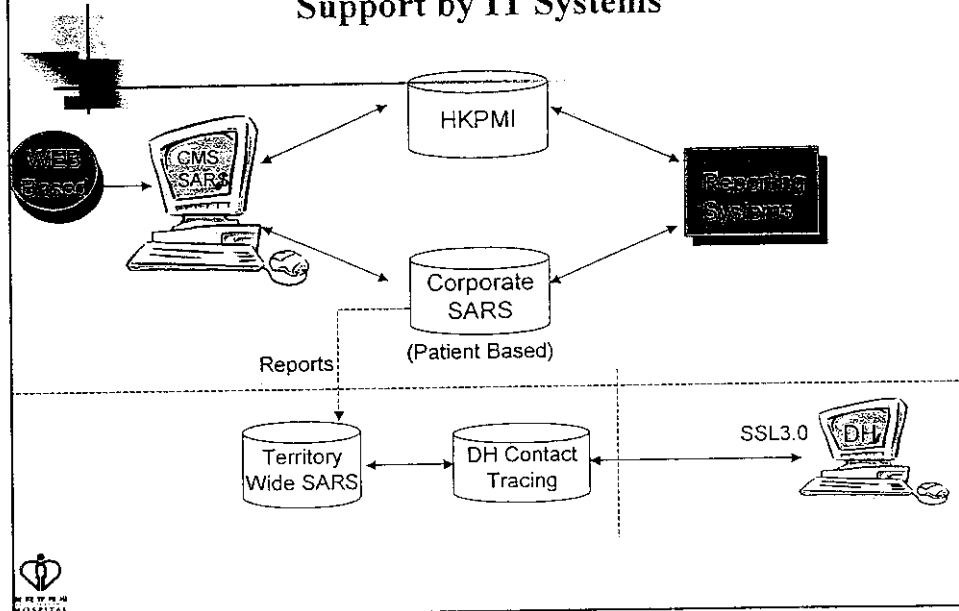
Enhancement of Patient Outcome

- Information collection, analysis & dissemination
- Sharing of information from publication in top international journals
- Experience sharing through forums & seminars
- Advisory groups: possible diagnostic & treatment approaches

Knowledge Management



Data Collection- Support by IT Systems



Case Fatality Ratio- WHO

	Case Fatality Ratio (%)
Hong Kong	11-17
Singapore	13-15
Canada	15-19
China	5-13
Overall	14-15

- Factors: age, sex, co-morbidity, route of exposure, dose of virus

Cumulative Proportion of SARS Death Hong Kong vs WHO

Age Group	Hong Kong (up to 16.6.2003)	WHO
0-24	0%	<1%
25-44	6%	6%
45-64	16%	15%
65+	58%	>50%
All Age	17%	N.A.

18% of the SARS patients are elderly and they account for 63% of all deaths in HK
 15% of the SARS patients and 49 % of deaths have comorbidity
 (COAD/Asthma, Ischaemic Heart Disease, CVA, cancer, DM, chronic renal failure,
 chronic liver disease)

Lessons Learned

(1) Relation with Government

- On-going clarification of roles
- Documentation of discussions/decisions
- Public transparency

(2) Public relations

- Change of style and tactics
- Needs strengthening in strategies
- Re-emphasize on staff relations



Lessons Learned

(3) Disease management

- Success of expert groups and central data support structure
- Success of electronic communication
- Strengths and weaknesses in different hospitals identified
- Cross sector community care to be strengthened



Lessons Learned

(4) Epidemic control

- Requires much better support from DH
- Builds on experience with case definition and eSARS
- Isolation facilities in all settings
- Enhances laboratory support
- Better delineation of criteria for different levels of care



Lessons Learned

(5) Infection control

- Opportunity to upgrade training and expertise
- Studies on HCW infection and PPE needed
- Review on hospital transfer arrangements
- Opportunity to upgrade ventilation, isolation facilities
- Impact on patient spacing, manpower requirement and service volume



Lessons Learned

(6) System capacities

- “Surge” capacity needed
- Critical factor in ICU expertise
- Territory-wide pooling of expertise and organizational learning potentials
- Cross-sector and cross-border solutions
- Prioritization of services re: elasticity



Lessons Learned

(7) Managerial capabilities

- Success of cluster structure and resource mobilizations
- Advantages of single system esp. in IT
- Follow through in decision implementation and communication
- Need to beef up HR capabilities
- Strengthening of central team



Lessons Learned

(8) Staff support

- Communication experience
- Participation in decision making, execution and feedback
- Psychological support
- Training
- Compensation
- Recognition