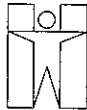



	<h2>Communicable Diseases and Pathology Services</h2>  <p>1</p>

	<h2>Role of Laboratories</h2>
	<ul style="list-style-type: none">■ Diagnosis■ Screening■ Surveillance■ Outbreak investigation■ Responding to biological incidents■ Monitoring of immunisation programme■ Quality assurance■ Development and training■ Communication with overseas laboratories <p>2</p>

Laboratory Functions

- Bacteriology
 - Antimicrobial resistance
 - STD
 - TB
- Public Health
 - Food & water
 - Microbial typing
- Virology
 - Centralized lab. providing service to public and private hospitals and clinics
 - WHO National Influenza Lab.
 - WHO National Polio Lab.



3

Community Acquired Pneumonia (CAP) Surveillance (1)

- Enhanced atypical pneumonia surveillance in early February
 - Daily list of CAP to GVU
 - Liaise with microbiology department of public hospital
 - Comprehensive lab. investigation including PCR, culture & serology on batteries of respiratory organisms



4

Community Acquired Pneumonia (CAP) Surveillance (2)

- 19 – 20 February
 - Detection of H5N1 virus in father and son returning from Fujian
- Early March
 - AP detected in Vietnam and in Hong Kong
 - Extensive investigation did not find causative agents



5

International Collaboration, Isolation and Identification of Viruses (1)

- March 15
 - WHO issued global warning on the emergence of SARS &
 - Approached 11 labs in 9 countries to set up international collaborating network
- Since then
 - Daily conference
 - Posting and daily exchange of lab. findings thro' WHO website



6

International Collaboration, Isolation and Identification of Viruses (2)

- March 18
 - CUHK reported finding of paramyxo-like virus / metapneumovirus
- March 21
 - HKU isolated agent in FRhk4 cells
 - Paired sera from CAP patients in GVU tested against the agent showed high titre antibodies



7

International Collaboration, Isolation and Identification of Viruses (3)

- March 22
 - EM showed enveloped coronavirus
- March 23
 - CDC provided polymerase sequence of coronavirus as well as primers
- March 24
 - Trying PCR on patients' samples using in-house and CDC primers



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After Coronavirus Found (1)

- March 27
 - Starting to do lab. investigation on SARS patients
- March 28
 - Amoy Gardens outbreak investigation including SARS coronavirus, legionella and anthrax
- March 30
 - Starting to use more sensitive newly designed primers



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After Coronavirus Found (2)

- April
 - Optimize testing strategy for PCR
 - Cell culture
 - Serology
 - Environmental testing
 - Established virus shedding pattern
 - Determined virus survival
 - Evaluate various testing kits



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Challenges (1)

- Workload
 - Over 20 000 tests performed in April-May
- Manpower
 - Highly trained staff with special skills required to work long hours
 - Deployment of junior technicians to assist in simple lab. work



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Challenges (2)

- Data management
- Organization of large volume of data
 - Co-ordination with various laboratories
 - Communication of data to DH and HA
 - Analysis of data
- Specimen bank
 - Large number of various specimen to be aliquoted, labelled and stored
 - Transfer of specimens for diagnostics development
 - Data management



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Thank you



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