



**香港大學醫學院**  
**THE UNIVERSITY OF HONG KONG**  
**FACULTY OF MEDICINE**

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November 21, 2003

Select Committee  
to inquire into the handling of the SARS  
outbreak the Government and the HA  
c/o 3/F, Citibank Tower  
3 Garden Road  
Central  
H.K.

Dear Sir,

**Submission to Legislative Council HKSAR**  
**Select Committee to inquire into the handling of the SARS outbreak**  
**by the Government and the Hospital Authority**

Enclosed please find a submission by the Faculty of Medicine. We wish to stress that the comments are meant for the future good of the community, and should not be regarded as adverse remarks made against rival institutions, a notion which our critics apparently believe in. In fact, the Faculty has been criticized for trying to make anti-SARS heroes into SARS culprits. These criticisms have unfortunately inhibited many professionals and Faculty members from making comments for the good of the common large, thereby denting the accountability of Hong Kong.

We suggested possible problems to explain certain anomalies. It is up to the Committee to investigate into where the problem lies.

We wish to point out that the two previous SARS reviews focused on system and organizations, and did not look into possible professional misjudgement and negligence of the doctors or chiefs of service.

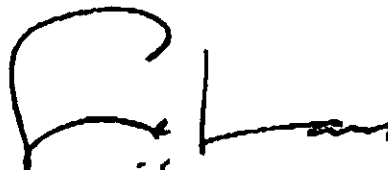
We also wish to draw the Committee's attention to the existence of a culture within the government and public system, consciously and unconsciously, of appeasement, face-saving, which is a Chinese characteristic, and political balancing. This is particularly obvious in the distribution of resources. In a crisis situation, this could make Hong Kong unresponsive.

HA does not appear to accept, at least openly, that there is a variability in the standard of service delivered by its various hospitals. Hospitals do vary in standard, attitude, policy, political concerns, e.g. that a certain measure may cause undue alarm to the public, or that individual's rights such as the right to visit the sick must be respected, thus ignoring the impact on the community at large. This would affect central HA planning and policy, and individual hospital's response to crisis management.

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The Faculty regards this review as a means to do forward planning to prevent and contain any SARS outbreak in the future, and will be happy to discuss further with the Committee on the issue.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'S.K. Lam', written over a faint horizontal line.

Professor S.K. Lam  
Dean

SKL/ac  
letter\_2/109

Encl.

**Submission by the Faculty of Medicine of The University of Hong Kong  
to the Legislative Council SARS Select Committee**

The ultimate objective of any postmortem examination is to find out the cause of death, learn from it, and come up with ways to prevent a similar happening in future.

The following are some hard facts regarding SARS in Hong Kong.

1. **Corona Virus Pneumonia is a disease completely new to man. Hong Kong is one of the hardest hit cities, with over 1,700 confirmed cases and nearly 300 deaths. The SARS epidemic in Hong Kong came under control in two and a half months. Hong Kong introduced temperature check at the border, and was able to confine the disease within the city limits. The innovative temperature check was copied by the rest of the world, and helped to abort a world epidemic.**
2. **The utter professionalism displayed by frontline healthcare workers particularly in hospitals worst hit by SARS such as PWH and UCH will make a place in the history of Hong Kong. This Faculty salutes them.**
3. **There is one special feature of this deadly infection: the disease starts in the community, but because of the physical sufferings, the patients always end up in a hospital. If the hospital's infection control is faulty, there will be a hospital outbreak, and if the outbreak is not contained, the infection goes back to the community. A community outbreak ensues and a community-hospital vicious cycle is then established, amplifying the spread. A key to stop the spread in a hospital is isolation, and the earlier the isolation is installed - isolation of beds, isolation of a ward, isolation of a floor, isolation of a building, and even isolation of a hospital, as the severity of the spread demands - the fewer the number of lives lost.**
4. **Figure 1 is taken from a report by Professor Moira Chan and her colleagues in the British Medical Journal (attached). It shows that each of five regional hospitals in Hong Kong admitted at least one index case in early March. One hospital did not spread the disease to medical staff; one hospital eventually did so when it was overwhelmed with new admission cases. Two others had a small outbreak involving hospital staff, which was soon controlled. Prince of Wales Hospital (PWH) developed a large outbreak, involving 168 medical staff, medical students, patients and visitors, failed to contain it, and resulted in a community outbreak, completing the vicious cycle described earlier.**
5. **In the case of the PWH, one crucial event is that one index patient, a 26-year old male, was admitted to ward 8A on 4<sup>th</sup> March 2003, but was identified to be infectious, i.e. he could spread his disease (in this case, his pneumonia) to another individual, on 14<sup>th</sup> March 2003. During these 10 days, the disease spread to an alarming number of staff and patients. The judgment that a disease is infectious, irrespective of its diagnosis, is a professional judgment.**

6. As shown in Figure 2, the disease spread to Amoy Gardens, and to other hospitals and their vicinities, including United Christian Hospital, Tuen Mun Hospital, Princess Margaret Hospital, Nethersole Hospital and the North District Hospital.
7. As shown in Figure 1, at Queen Mary Hospital (QMH), four simple infection-control measures were started from the outset: droplet prevention, patient isolation, patient triage, and no visiting. During the whole epidemic, two hospital staff were infected, and both infections were due to an environmental error, which was immediately corrected. Hospitals, that were late in installing these measures, suffered more hospital-acquired infections (Figure 1). Two other measures at QMH are worth mentioning. The professors and senior staff, and not the junior staff, were the major frontline workers, because they realized that this was a deadly and totally new disease so that sending clinically inexperienced doctors to the frontline would only expose them to great risk. Every day, a team headed by a professor or senior staff went round the general wards to screen and transfer out any possible SARS case, to minimize the spread of SARS to the other patients and staff.

*For the index case in PWH, why was the judgment of infectiousness made only 10 days after admission?*

There could be three possibilities.

1. There was professional incompetence and therefore misjudgment.
2. There was professional negligence in handling potentially infectious patients.
3. The managing team was not sentient of what had been happening in the community and other hospitals, and did not consider infectiousness in their patient management.

*What were the reasons for hospitals, especially the PWH, for not instituting the four basic infection control measures in paragraph 7 above early in the course of the outbreak?*

There could be four possibilities.

1. Defect in knowledge and training in basic hospital infection control.
2. Underestimating the significance of the initial outbreak.
3. Too much misdirected political consideration so that the interest of the community at large was missed, e.g. worrying about causing "undue" alarm to the public, concern for individual's rights such as the right to visit the sick.
4. Mismanagement, e.g. low index of suspicion, non-vigilance, indecisiveness, negligence, incompetence at the management level.

Solution: (1) Enhance the flow of information between HA, DH and the two medical schools, as a short-term measure. (2) Centre for Disease Control and Prevention, which has facilities for surveillance and statutory power to intervene, as a long-term measure.

*Why did the infection of hospital staff continue to occur for so long despite the availability of protective gears?*

There could be several possibilities.

1. Staff became less vigilant in the face of relatively high workload and long working hours.
2. Education and training of staff in infection control measures were not vigorous enough.
3. Inadequate understanding of infection control, e.g. instead of degowning at the exit of an infected area, the protective but then "dirty" gowns were worn even in canteens (pictures shown by Professor Joseph Sung during his talks), spreading the infection to other staff.
4. Enforcement of infection control measures was inadequate and not strict enough.
5. Failure to detect less symptomatic patients nursed in general wards. Note that asymptomatic carriers have not yet been documented.
6. Wrong gear

*The good work at the QMH and PYH was apparently seldom referred to, for example not in the HA Board Meeting minutes, and Dr. Szeto Wing Hong and Dr. Raymond Yung, the consultants responsible for the success in these hospitals (through vigorous control, vigilance, education and training), were not formally consulted, and were approached for advice late in the course of the outbreak. This could have delayed the eventual control of the spread of the infection to staff in many of the hospitals.*

There could be several explanations.

1. The success at QMH or PYH was not known.
2. HA was worried that appreciation might reveal the high variability in standards of the various hospitals.
3. Hospital rivalry and pride prevented individual hospitals from consulting each other.
4. HA management considered it politically unwise to ask QMH or PYH to advise other hospitals e.g. PWH.

Solution: Intensive and disciplinary training, persistent and repeating education, and vigorous and obligatory enforcement of control measures

*To properly manage an epidemic, it is obviously important to know what the epidemic is due to. After the discovery of the Coronavirus as the probable cause by The University of Hong Kong (HKU) microbiologists, the university made the virus available to all researchers in the world including the Chinese University of Hong Kong (CUHK), and sought to understand what the outbreak in PWH, which at the time had 70% of the cases*

*in Hong Kong under their charge, was due to, by asking PWH to share their patient specimens with them. This had not happened despite intervention by the Department of Health and by Dr. E.K. Yeoh, who then had to manage an epidemic without knowing what 70% of it was due to. This uncertainty could have slowed the Bureau to adopt correct measures to control the epidemic.*

There could be several explanations.

1. CUHK/PWH worried that their research results could be proven wrong by sharing their patient specimens with HKU; that is, pride and ego came before the common good of the community.
2. The administration wanted to appease the two rival medical schools; that is, political balancing came before the common good of the society.
3. The management was weak, which meant that orders were not followed, let alone executed.

Solution: The culture of face-giving and political balancing is to be turned into a culture of appreciation and recognition of good performance.

*Conclusions:*

1. *The government, while slow in the initial period of the outbreak, did an excellent job in controlling the epidemic.*
2. *Hospitals varied widely in standard, attitude, and policy as well as the practice of infection control.*
3. *Political balancing, as practiced in Hong Kong, is detrimental. This would be counter productive to making Hong Kong competitive and puts patients/community at risk.*

November 21, 2003

**Notes:**

**Figure 1 shows the number of new cases of SARS arising from hospital staff (solid bar), and from the community (open bar) each day from February 22<sup>nd</sup> to April 12<sup>th</sup> 2003.**

**\* indicates the timing of admission of first index case admitted to each hospital.**

**1 = timing of implementation of infection control policy for "Droplet precautions"**

**2 = timing of establishment of isolation wards**

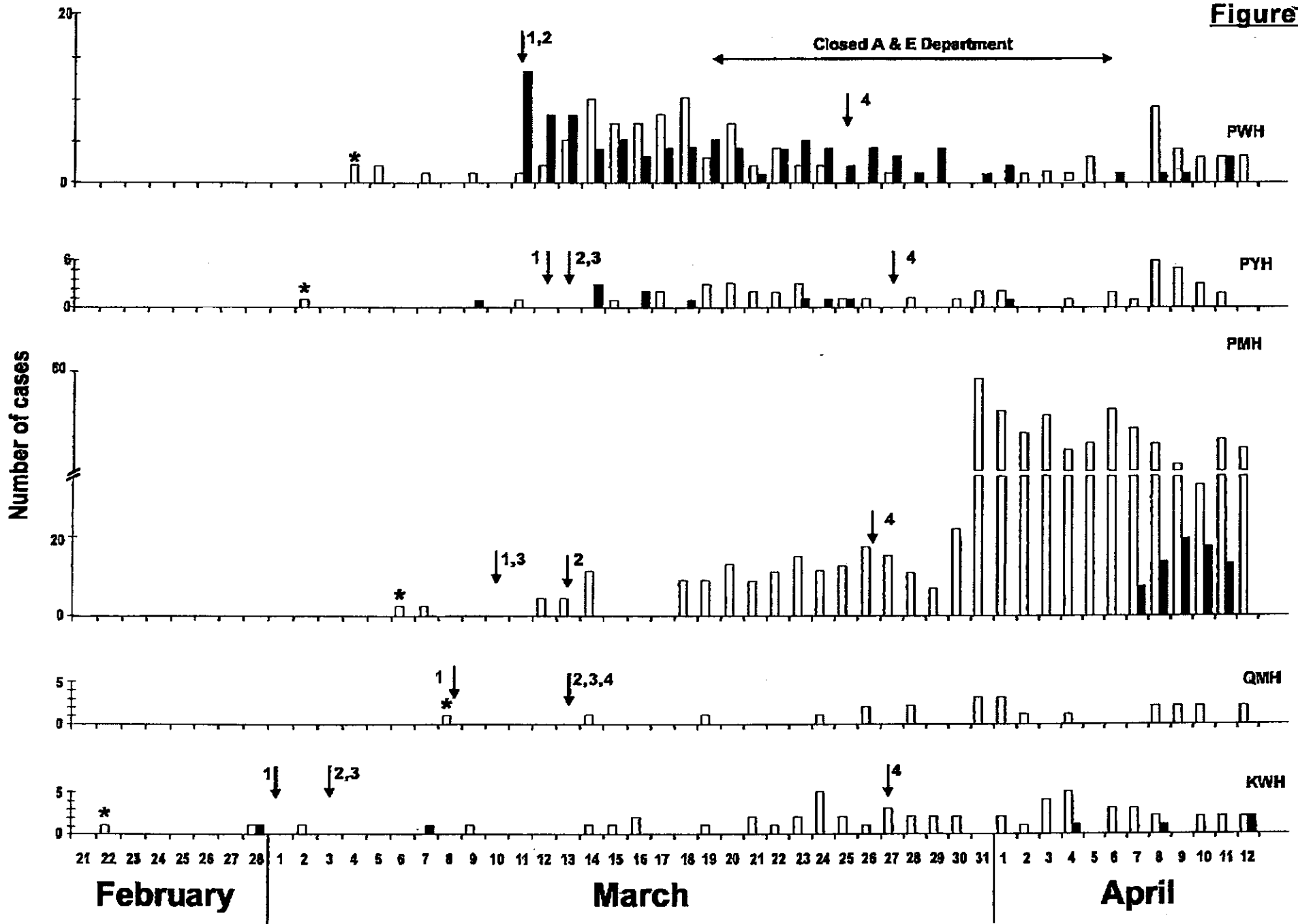
**3 = timing of direct admission of definite and suspected SARS patients to separate isolation wards**

**4 = closure of isolation wards to all visitors.**

**# Note that the contents were reported to BMJ (attached as Annex I)**

**Figure 2 shows the distribution of the buildings affected by SARS as reported by the Department of Health. Affected buildings aggregate around hospitals with affected staff.**

Figure 1

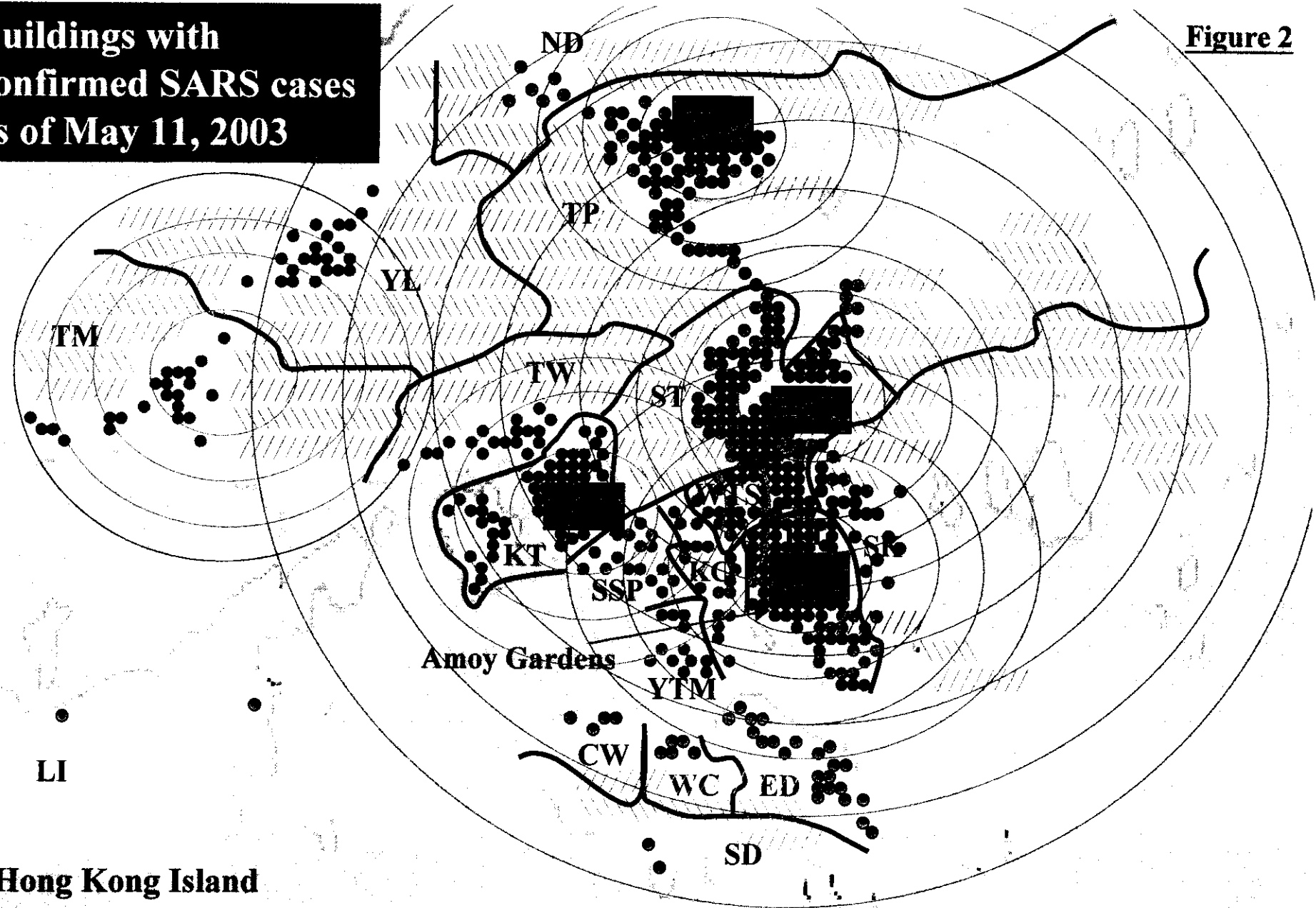


REPRODUCTION OF MEDICAL RECORDS



**Figure 2**

**Buildings with confirmed SARS cases as of May 11, 2003**



- Hong Kong Island
- Kowloon
- New Territories West
- New Territories East