

Severe acute respiratory syndrome: a challenge for public health practice in Hong Kong

A Lee, A S M Abdullah

J Epidemiol Community Health 2003;**57**:655–658

Severe acute respiratory syndrome (SARS) is now a global challenge affecting more than 8000 patients in different continents. The dictum of public health practice especially for infectious disease is "prevention better than cure". It is especially true for SARS as the treatment strategies remain diverse and experimental. Maintaining a healthy and hygienic environment can be one of the effective public health measures to combat infectious disease. The major challenge is that some of the most important public health measures are to be taken outside the health sector. The community also needs to be strengthened and equipped with the health skills to promote better health and hygiene. There is also the need to create a supportive environment conducive to health for long term sustainability. The WHO approach of promoting health through setting approach would be one possible solution to face the challenge. This paper will describe some of the public health initiatives in Hong Kong through "setting approach" and "community development model" in helping the society fight against SARS. With the emergence of SARS, this might be the time to globalise public health medicine as an important component of medical practice.

Severe acute respiratory syndrome (SARS) was diagnosed in more than 1800 patients in 17 countries (including the United States and Canada) within two months (between 1 February and 31 March 2003).^{1,2} At the time of writing (20 June 2003), there was a cumulative total of 8416 probable cases and 804 deaths that have been reported from 29 countries (1755 cases in Hong Kong with 296 deaths*). On 12 March the WHO issued a global alert about SARS. Case studies in Hong Kong and Canada make it quite clear that SARS is an infectious disease.^{3,4} Epidemiological investigations and laboratory studies have identified the novel coronavirus playing an aetiological part of SARS.^{5,6}

The impact of SARS on the world is still unclear at this stage but it is becoming a global hazard with its alarming high infectivity. SARS has spread throughout the world because people can be exposed in one place and be half a world away a day later when they become symptomatic. The outbreak has prompted the hospital authority and the department of health of Hong Kong to implement series of public health measures and hospital policies for the diagnosis and management of patients with SARS.⁷ SARS is an emerging infectious disease, and treatment strategies remain diverse and experimental as inclusion of control patients is neither possible nor ethical.⁸ It has been shown that the practice of droplet precaution and contact precaution is adequate in significantly reducing the

risk of infection after exposure to patients with SARS.⁹ Therefore good public health practice in developing similar precaution at community level would also help to reduce the risk of infection in the community.

WHAT SHOULD BE EFFECTIVE PUBLIC HEALTH PRACTICE?

Many diseases, including infectious disease can be prevented through self care and self help. Individual citizens should take the responsibility to keep the home environment and public utilities clean and healthy as a long term solution to combat against infectious diseases, and promoting better health and hygiene. The WHO launched the Ottawa Charter for Health with a strong emphasis on strengthening community action, creating a supportive environment, and developing personal skills to promote health.¹⁰ The charter highlighted five principles:

- Building a healthy public policy
- Strengthening community involvement
- Create a supportive environment
- Building personal health skills
- Re-orientation of health services

The declarations of the 4th world conference on health promotion in Jakarta in 1997 and the 5th world conference on health promotion in Mexico in 2001 also called on strengthening the individual and community action and responsibility in health. Promoting good public health practice needs a community development approach that entails supporting local residents in actions to improve their health. The "new public health" movement has been in shape after a series of initiatives from the WHO—starting with Alma Ata Declaration on Primary Health Care in 1977, and culminating in the Healthy Cities Projects.¹¹ This has led to greater emphasis on improving health through changing peoples environments and living conditions.

The biggest challenge for public health practice is that some of the most important public health measures are to be taken outside the health sector by those with responsibility for economic and social policy, such as politicians, educators, industrialists, and economists. The SARS event in Hong Kong is high priority on the public policy agenda as it affects other sectors such as education, transport, building management, social services, catering, tourism, and so on. The challenge is how to coordinate different sectors to implement effective control measures, and empower the community in taking responsibility for prevention.

NEW PUBLIC HEALTH INITIATIVES IN FIGHTING AGAINST SARS

The quote from Kass in 1977 stated, "The terror of unknown is seldom better displayed by the response of a population to the appearance of an epidemic, particularly when the epidemic strikes without cause."¹² This described the fears

*http://www.who.int/csr/sars/country/2003_06_20/en/

surrounding the newly recognised legionnaires' disease, and the same would apply to SARS. Falsey and Walsh described fears surrounding SARS being the public response to an unexplained atypical pneumonia.¹² The public health challenge is to equip the public with the personal health skills to cope with different uncertain health conditions, which could come one after the other. The whole community needs to be strengthened to create a supportive environment conducive to health. The Ottawa Charter for Health formed the basis for the growth of the WHO's "setting approach" to promote health which views the different settings in which people live and work as "whole" units. The people within the setting of their everyday life can create health.

Promoting health through setting approach

School is a prime example and school health education needs to include the training of skills of health promotion, which is the process of enabling people to increase control over and to improve their health.¹⁴ Most school communities are microcosms of the larger community, providing opportunities for children to develop and practice the skills in supporting a healthy lifestyle. The health educators should be trained to adopt the "health-promoting school" model, which is guided by a holistic view of health and by the principles of equity and empowerment.¹⁵ Schools would be the catalyst for bringing together the various agencies having an impact upon the health of the community. A comprehensive programme is needed to include teachers' training, curriculum development, community participation, changing policies and practices, and research so a supportive healthy environment can be built at schools then cascades the effect to the community as schools are microcosms of the larger community.

The "Health Promoting Schools" and "Healthy Schools Award Scheme" launched by the Chinese University of Hong Kong have fulfilled those needs.^{16, 17} These programmes promulgated the concept of Health Promoting School as new initiative in school based management to move beyond individual behaviours change to consider organisation changes such as improvement of physical and social environment.¹⁷ It is in line with the "New Public Health" concept. This would enable the students and also the teachers and parents to develop visions and ideas to influence their lives and living conditions.

With the establishment of a network of "Healthy Schools" and the training programme† the Chinese University of Hong Kong was able to develop "School against SARS" programme including an education video and education kit within one week (http://www.hkedcity.net/project/cuhk_sars/index_e.phtml). The aim is to equip school principals, teachers, parents, students, and other school staff to fight against SARS. The school based approach was possible as a group of schools teachers have been trained as health educators and some schools have achieved the standard of being "Health Promoting Schools" according to the standard of Hong Kong Healthy Schools Award based on the WHO Regional guidelines.^{18, 19} The "Schools against SARS" programme has moved away from the traditional health education approach of information giving towards demonstration of how members of the schools would make healthy choices easier choices.

Practical guidelines for "Health Promoting Schools" have been developed in local context to facilitate schools to develop healthy school policies, building up personal health schools, establishing school health services, creating a healthy school physical and social environment, and maintaining strong community partnership in health.^{18, 19} Those are essential areas for effective public health practice at schools. Preliminary analysis has shown that the health risk behaviours of students

were lower among schools achieving high standard of "Health Promoting Schools".²⁰ If the programme can be widely implemented, it would have an impact on at least 1 million students and 2 million parents in Hong Kong, nearly half of the total population (total population about 7 million).

Hygiene charter

As a public health discipline, there is no better dictum "prevention is better than cure" in the SARS crisis and control of infectious disease. The public should take this opportunity to equip themselves with the skills needed to maintain a good standard of hygiene and advancement of health education knowledge. Effective public health practice needs to involve the community at large and encourage people to be involved in all decision making processes relating to health. As a continuing effort in the fight against SARS, Operation UNITE (community initiated movement comprising community leaders from all sectors to help the community in fighting against SARS) has conceived a hygiene charter with the academic and professional advice by the Chinese University of Hong Kong, which aims at encouraging individuals, as well as business and industry sectors, to pledge their commitment to improve hygiene practices for the good of all.²¹ The main objective is to promote civic responsibility at individual and corporate level to create a healthy environment so the community can be empowered to take positive action and assume responsibilities in the continued fight against SARS and infectious disease in the future.

The charter puts forward suggestions and guidelines on hygiene practices for individuals, management, and businesses and organisations over 10 different sectors. The Chinese University of Hong Kong through their experience in health promotion through setting approach such as "Healthy Schools" and "Healthy City",²² and also clinical management of large numbers of patients with SARS,³ has developed a set of guidelines and standards for hygienic practice in the community. Through consultation with experts in different sectors, it is possible to translate the principle of prevention into effective, practical, and user friendly procedures. The charter would facilitate development of healthy public policies as it involves different sectors, and also strengthening the community action to create and sustain a supportive environment for health.

In coping with epidemics of infectious disease, a healthy epidemic could be considered. The Healthy Cities movement can provide a framework for an integrated and holistic approach to public health.²³ The approach can lead to intersectoral action and community participation in identifying and solving priority problems by addressing the physical and social health determinants.²⁴

STRENGTHENING THE HEALTHCARE SYSTEM

Based on our current understanding about the pathogenicity and transmissibility, SARS needs to be regarded as a serious threat to population health. Health practitioners should not wait to take measures until this affects more populations as was the case for HIV epidemic in many countries in the early 1980s. While work will continue to better understand the SARS, the healthcare systems in each country should be prepared to manage SARS.

The current experience in Hong Kong and elsewhere suggests that there is a need for improving the physician workforce in the field of public health medicine. To carry out essential public health practice, they should be well trained in emerging infections and prepared for any new challenges. Healthcare system need to be strengthened with an efficient information systems that will gather information from many sources to disseminate collated information to those who want to know them in a timely manner. Reorganisation of healthcare systems with an international focus to ensure

†<http://www.cuhk.edu.hk/med/hep/english/english.html>

adequate surveillance mechanisms, rapid response to epidemics, prevention and control strategies, and maintenance of optimal infrastructure nationally and internationally. Countries where no SARS cases have yet been reported, should be prepared with clear contingency plans at national and local level, with international cooperation for dealing with the SARS outbreak. International assistance might be necessary to help low income countries to prepare for the SARS epidemic.

Re-orientation of health services towards primary care

During the SARS crisis, there has been high demand on hospital services. Primary health care is supposed to be the gatekeeper to the hospital. However, the primary care system in Hong Kong is not very well developed and works quite independently from the rest of healthcare system, which is dominated by the hospital authority (HA): 70% of primary medical care is provided by the private sector whereas 90% of the hospital care is carried out in public settings under HA with little interface between primary and secondary care, let alone collaborations between the private and public sectors.^{25, 26} There is a large overlap of symptoms and signs in the clinical manifestations of SARS from upper respiratory infections. With the fear and panic in SARS issue, it would be very difficult for patients with symptoms to be managed in primary care setting without a close working relationship and supporting system between primary and secondary care. All symptomatic cases would end up being admitted to hospitals. If the primary care doctors can have direct access to basic diagnostic procedures such as chest radiographs and blood tests, and direct communication with the hospital team managing SARS, they would have more confidence in selecting suspected cases for secondary care. In doing so primary care physicians would need appropriate training on diagnostic methods and support from additional personnel. Patients who are not sick enough to warrant secondary care should be strongly advised to limit their activities until they are asymptomatic. Also the primary care doctors can be useful health educators in the community if they can be informed rapidly with the latest information on SARS.

SARS AND GLOBALISATION OF PUBLIC HEALTH MEDICINE

Public health care workers can play an important part in combating the spread of SARS as they are front line professionals. The WHO, the CDC, and national and local health agencies across the globe have disseminated latest information for clinicians, public health officials, healthcare professionals, travellers, household contacts, and many other affected parties.¹ Coordination of the international response strategy has been facilitated by regular videoconferences with leaders in the operations centres at the WHO, the health authority, and the CDC. Satellite broadcasts, webcasts, and videoconferencing are supporting the dissemination of latest information to the entire global health community.

With the emergence of SARS and the worldwide scare on population health, this might be the opportunity to globalise public health medicine as an important component of medical practice. Feachem defined globalisation as openness of trade, ideas, people, and culture.²⁷ Globalisation would permit practitioners in different settings from different countries to become well informed about any new developments with rapid communications and sharing of ideas as to how to control SARS. Coordinated, forthright, and determined advocacy by medical practitioners working in different settings and their national and international associations could and should play a much greater part in mobilising public and political opinion.²⁸ Groups such as the World Medical Association, the Faculty of Public Health Medicine of the United Kingdom, and the American Public Health Association could play a greater

part in this aspect. Their advocacy should include the promotion of essential public health functions with the availability of appropriate services for all practitioners and populations worldwide.

THE WAY FORWARD

Good public health measures in maintaining a healthy living environment is the long term solution in controlling an outbreak of infectious disease. The effort can only be sustained if health can be put on high priority in all sectors, and the whole community can be empowered to create a supportive environment conducive to health. Promoting health through setting approach such as healthy cities, healthy schools, hygiene charters should be encouraged to make health and hygiene a priority issue. The primary care should be strengthened in terms of training and integration with the hospital services so the burden of hospital services can be relieved especially during a health crisis such as SARS. A strong primary health care system can also coordinate with different sectors to face the challenges of future epidemic to public health.

Authors' affiliations

A Lee, Centre for Health Education and Health Promotion, School of Public Health, the Chinese University of Hong Kong
A S M Abdullah, Department of Community Medicine, The University of Hong Kong

Correspondence to: Professor A Lee, Centre for Health Education and Health Promotion, The School of Public Health, The Chinese University of Hong Kong, 4th Floor, School of Public Health, Prince of Wales Hospital, Shatin, NT, Hong Kong; alee@cuhk.edu.hk

Accepted for publication 24 June 2003

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THE JECH GALLERY.....

Influential women in occupational health

Sophia Kisting, MD: Internationalist seeking global standards



(photo credit: Lars-Erik Byström, Swedish National Institute for Working Life).

“Exposure of women to hazards at work is often invisible, in unpaid as well as paid work.”

April 1950–
Country of birth: Namibia

Sophia Kisting works to reduce HIV infection, improve reproductive health, and conduct occupational surveillance, assessing workers for silicosis and asbestosis. A physician and researcher at the School of Public Health at the University of Cape Town, she is involved in occupational health programmes, including prevention of needlesticks and HIV/hepatitis.

Working in a world where over 65% of the population works without insurance or employee protection, Kisting is particularly interested in women in agriculture, especially exposure of women and children on fruit farms. In Sub-Saharan Africa, 75% of agriculture workers are women in seasonal, casual, or subsistence farming.

Kisting looks to help with the establishment of a strong health and safety network in Africa, and to strengthen the north-south relationship internationally. Gaps in legislation can be exploited, but the goal is one good global standard for working conditions.

D F Salerno

Clinical Communications Scientist, Pfizer Global Research and Development, Ann Arbor Laboratories, Ann Arbor, MI, USA

I L Feitshans

Adjunct Faculty, Cornell University, School of Industrial and Labor Relations, Albany, NY, USA

Correspondence to: Deborah F Salerno, 2800 Plymouth Road, Ann Arbor, MI 48105, USA; deborah.salerno@pfizer.com