Review Article

SARS Revisited: Managing "Outbreaks" With "Communications"

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Abstract

   "Risk communications" has acquired some importance in the wake of our experience of SARS. Handled well, it helps to build mutual respect between a government or an organisation and the target groups with which it is communicating. It helps nurture public trust and confidence in getting over the crisis. The World Health Organization (WHO) has also come to recognise its importance after SARS and organised the first Expert Consultation on Outbreak Communications conference in Singapore in September 2004. This article assesses the context and the key features which worked to Singapore's advantage. Looking at the data now widely available on the Internet of the experience of SARS-infected countries like China, Taiwan, Canada, the article identifies the key areas of strategic communications in which Singapore fared particularly well. Another issue discussed is whether Singapore's experience has universal applicability or whether it is limited because of Singapore's unique cultural, historical and geographical cirumstances. Finally, the article also looks at some of the post-SARS enhancements that have been put in place following the lessons learnt from SARS and the need to confront new infectious outbreaks like avian flu.

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Introduction

   In the short span of 3 years since SARS first appeared on the Asian landscape, terms like "risk communications" and "outbreak communications" have assumed greater import and found common usage in the lexicon of governance by public health systems in our part of the world.

   Recognising the need for strategic communications during outbreaks, the World Health Organization (WHO) sought Singapore's support in September 2004 to host the first WHO Expert Consultation on Outbreak Communications. The three-day meeting was organised to lay the foundation for a global consensus on effective principles, strategies and tools for outbreak communications.

   Risk communications is a relatively young discipline, believed to be no more than 3 decades old. It originated in the West in the late 1980s in response to environmental crises.[1] Health communications – which has much earlier origins, has increasingly come to focus its attention on emerging infectious diseases, as opposed to long-term health risks, such as those associated with tobacco and alcohol.[2]

   Risk communications is the process of communicating honestly and effectively about the risk factors associated with a wide range of natural hazards and human activities. If and when it is managed properly, risk communications builds mutual respect between a government or an organisation and the target groups with which it is communicating. It helps to nurture public trust and confidence in getting over the crisis. It has been reported that there are now as many as 8000 risk communications articles in peer-reviewed journals.[3]

   The United Kingdom's Department of Health, based on an analysis of more than 1000 studies worldwide, listed succinctly some useful principles for professionals handling public risk issues, including the need for active communication; openness: i.e., always acknowledging problems and uncertainties; transparency; demonstrating action and progress; treating people's fears seriously;

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ensuring authoritative sources deliver the same messages; framing announcements and responses to provide context; and encouraging and enabling self-responsibility. Similar principles have been proposed by outbreak communications experts elsewhere.[4]

Post-SARS Reflection

On balance, we can claim with some confidence that we managed well on most of the basic communications principles listed above. Indeed, much has already been written about the outstanding way in which Singapore successfully managed the SARS crisis, especially from the perspective of outbreak communications. The Director-General of the WHO stated in his welcome speech at the meeting in Singapore in September 2004 that:

> "It is appropriate that this first step into outbreak communications is being taken in Singapore. There are few places that have demonstrated so clearly that the principles of outbreak communications work just as well in Asia as anywhere else, perhaps even better. The risk communications Singapore used during the SARS outbreak won praise worldwide and enhanced the trust its citizens placed in their leaders."[5]

In a similar vein, 2 US experts – Peter Sandman, a risk communications specialist based in Princeton, New Jersey and his wife Jody Lanard, a psychiatrist, observed that:

> "…Singapore's open and responsive risk communication is impressive. In risk-communication terms, Singapore has certainly earned the cautionary compliment it received from the WHO's Dr Osman David Mansoor, 'If Singapore cannot get it under control, it is going to be very hard to get it under control anywhere else.' "[6]

In contrast, a report in early 2004 by Justice Archie Campbell, appointed to examine Ontario's handling of the outbreak that killed 44 people and sickened hundreds more, was unequivocal in its assessment that the public health system had failed the people of Canada's most populous province.[7] The report assailed the absence of a public health communications strategy. Similarly, US risk communications specialists Sandman and Lanard observed that when it came to risk communications, health officials in Canada were "zero beginners".

> "They were poor leaders. They just kept doing PR. Rah-Ra Canada… They were doing public relations rather than crisis communications… they did not do good anticipatory guidance to help the public get used to what might happen…They gave a very bad impression, consistently, that they were much more concerned with Canada's economic well-being than the rest of the world's concerns."

Lanard went on to observe that while officials in Singapore accepted why other countries might restrict travel to and from a SARS hot zone, Health Canada appeared to view its role as that of national cheerleader, rather than as a responsible partner in the global effort to contain the disease.[8] For instance, Ontario officials reacted vociferously by attacking the WHO for issuing its travel advisory warning on Toronto and their defensive posture may well have been partly to blame for a relapse of the disease when precautions were withdrawn too early.

A panel of prominent experts convened by the Office of Transnational Issues at the Central Intelligence Agency (US) also gave "*low marks for poor handling of SARS vis-à-vis the public*" to China for its cover-up or partial reporting of the disease for almost 3 months, endangering the world by its actions; Taiwan for the cover-up of its second wave of cases in May 2003; and Canada, for its initial indignation over the WHO's travel restrictions to Toronto.[9]

Whilst it is tempting to bask in the effusion of praise for Singapore's handling of the crisis, it is opportune now, 3 years after the crisis, to reflect on how Singapore fared in comparison to other SARS-infected countries, based on the voluminous data widely available online showing how China, Canada, Vietnam, Taiwan and others managed the crisis. Seen from a communications perspective, the following will be briefly considered:

a) The unique features in the way the crisis evolved;

b) The extenuating circumstances in Singapore that seemingly worked in our favour;

c) The exceptional steps we took, over and above those adopted by other SARS-affected countries, which made the difference;

d) Whether the risk communication principles we adopted are applicable or generalisable across cultures and states or unique to the Singapore environment; and

e) The changes in communications strategy that were prompted by the crisis.

Uniquely SARS

SARS was the first pandemic of the 21st century. But success in controlling it was achieved largely through old-fashioned, brute force methods used during epidemics in earlier centuries, such as physical quarantine.

It is significant that the SARS virus was seemingly indiscriminating – affecting rich and poor, doctor and patient, and crossing borders with impunity. SARS was not

just another disease of the poor. The experience of Toronto with SARS in 2003 showed clearly that viruses could also be choosy – preferring modern cities over rural settings. Toronto boasted of having one of the world's best health care systems, but failed to react fast enough and the city paid a price for it.

It was remarkable that Vietnam became the first country to be declared SARS-free by the WHO on 28 April, some 3 weeks before Singapore. Vietnam succeeded in keeping the number of infections to 63 and the death toll to 5 people who worked in hospitals.[10] After the first case was identified in late February, Vietnamese officials were open and quick to react. They welcomed a WHO team of international experts and embarked on an aggressive campaign to educate the public on SARS. Like Singapore, Vietnam also designated 2 key hospitals for SARS patients. That Vietnam was able to achieve SARS-free status before Singapore, was, in the words of Dr Khan of the Atlanta Centers for Disease Control, "*a matter of luck*". He observed that "*Vietnam had one super spreader. Singapore had five. By the time we knew what was going on, three had infected many. You (Singapore) were very unlucky and unfortunate in that.*"[11] What was equally surprising was the fact that the disease never quite took hold in neighbouring countries like Malaysia and Indonesia.

Whereas it took several years to discover that HIV caused AIDS, it took no more than a month or so of international collaboration to discover the new coronavirus that caused SARS and swiftly complete the genetic sequencing of the pathogen, a consequence perhaps of the immense media attention lavished on the virus.[12] SARS also showed up the wonders of information technology, which helped connect the fragmented worldwide public health systems. The WHO reportedly used a virtual network of leading research laboratories connected by a shared website and daily teleconferences to identify the SARS coronavirus. During the SARS outbreak, the WHO reportedly received 50% of its data through the media.[13]

Context

Singapore began with some clear advantages. For starters, we have no rural/urban continuum or federal/state relations to worry about, a serious problem faced by affected countries like Canada, China, and Taiwan during the SARS crisis. Singapore also has its own borders, with only 200 km of coastline, one main airport, two land crossings and a key passenger port, which gives us better control over our environment. However, while we were able to effect border controls readily, our smallness also increased the danger of an immediate epidemic in the event that the disease spread beyond the hospitals into the community.

When SARS penetrated Singapore in late February 2003,

there were already critical foreign media reports of cover-ups and a lack of transparency in reporting by the governments affected, especially in Northeast Asia. Singapore officials were acutely aware of this, and consciously or otherwise drew their own lessons from it. We monitored the spread of the disease in Hong Kong, especially the protracted saga of Amoy Gardens, studied possible scenarios very closely, anticipated problems and were able to avoid some of the more obvious mistakes and pitfalls.

A strong, stable government and a professional civil service inherited from over a hundred years of British colonial rule ensured exceptionally rigorous standards of honesty and efficiency and many intervening layers of authority, which prevented "fuzzy" data from surfacing. This legacy of a professional civil service differentiated Singapore from Taiwan and China. PM Lee highlighted this factor at the Administrative Service Officers dinner on 24 March 2005:

> "Few other countries operate like Singapore… it is hard to imagine civil servants operating this way in nearly any other country. But in Singapore administrative officers can practise public administration almost in laboratory conditions."[14]

Indeed, it was precisely these "laboratory conditions" which made possible a number of quick actions – the speedy amendment of the Infectious Diseases Act to give more teeth to enforcement action against quarantine breakers, which was approved by Parliament under a certificate of urgency; the immediate acquisition of thermal scanners at considerable cost for use at all border points and key premises; contingency accommodation and also compensation for quarantined persons; the mass purchase of masks, gowns and thermometers and other equipment for hospitals; and the deployment of Ministry of Defence personnel to assist in contact tracing and Defense Science and Technology Agency (DSTA) personnel to set up systems at the Ministry of Health for enforcing quarantine orders.

Pushing the Envelope?

A number of actions taken by Singapore warrant mention:

Technology

The Infrared Fever Screening System – TIME magazine hailed it as one of the coolest inventions of the year 2003. Better known as thermal scanners, the system had been jointly developed by the DSTA and Singapore Technologies Electronics and put together within a week or so. During the SARS outbreak, Singapore was the first to deploy thermal scanners, which gave a major psychological boost to public morale and the sense that the disease could be

stopped at our key border points of entry. Marketed at a cost of $90,000, more than 160 of the systems were sold to the government by Singapore Technologies Electronics and to organisations in various countries.[15] The obvious lesson here in fighting the crisis was that a multi-disciplinary approach is crucial and there should be no artificial boundary between medicine and engineering and other disciplines. Indeed, other technological aids from a range of agencies which made a difference included diagnostic kits, devices used by our security agency CISCO to keep track of quarantined persons in households, web portals and extensive use of databases for mass contact tracing.

However, there were skeptics who questioned the scientific effectiveness of such systems. Canadian officials at a conference observed that Singapore's widespread use of the instrument had prompted the Canadian public to put pressure on its officials to introduce the instrument at Canadian border checkpoints. The Canadians, however, were persuaded by their own engineers that it had only limited value. They did not fully appreciate that whilst Singapore was well aware of its limitations, the scanners nonetheless performed a vital psychological defense role.

A SARS-dedicated TV channel

Probably a world first, this SARS-dedicated TV channel was launched with the intention of making information available to all. Ratings were predictably low and there were critics who charged that it was a case of "overkill", observing that countries like China and Taiwan did not see the need for a similar measure in spite of the wider spread of the disease there.[16] These countries pressed their existing channels to do the job. Critics questioned if there would be a special channel every time a crisis popped up. Predictably enough, the channel had a difficult time sustaining viewer interest, given that it subscribed to only one topic and one cause. Nonetheless, the SARS channel had been set up quickly on the premise that information be made available through all possible platforms.

Transparency

Transparency – a word that carries with it a powerful array of moral and political associations – honesty, guilelessness and openness. Singapore carried its sense of transparency one step further. At the start of the outbreak, Singapore took the unusual step of informing the WHO and the international community that a Singaporean doctor onboard an SIA aircraft was suspected to have SARS. Singapore was well aware of its potentially negative impact but the protection of public health overrode all other considerations. Singapore's disclosure allowed the WHO to take prompt action and issue an emergency travel advisory on the same day, 15 March 2003.

Transparency was also extended to giving the WHO representative in Singapore untrammeled access. Every afternoon during the crisis, all the data and information on developments over the last 24 hours were collated by the Ministry of Health (MOH) and discussed at a conference chaired by the Director of Medical Services, attended by observers from the WHO.[17] The WHO thereby had access to the same raw data from the epidemiologists and clinicians as MOH officials.

Leadership

In every one of the SARS-affected countries, leadership undoubtedly played a crucial and symbolic role. It was certainly a key factor in Singapore's success in managing SARS in that the highest levels of government came into the picture very early in the crisis and took the lead. Within a month of the first infection, the Cabinet realised that SARS went beyond domestic public health issues and was not solely the responsibility of the MOH. The Prime Minister instructed the convening of the Executive Group (EG) of relevant Permanent Secretaries on 4 April, followed by a Ministerial Committee on 5 April, to oversee what was now a crisis of fear. Earlier, the PM had also set up a taskforce of 3 ministers under the Health Minister and the PM had made clear that one of its missions was "to think in terms of worst-case scenarios" and that it would have to ask many "what if" questions.[18]

Communication Tools

Perhaps more so than many other countries, every conceivable communication tool was employed and finely calibrated to reach out to the maximum number of people and this was achieved successfully through a *blitzkrieg* of efforts by a host of agencies working together and at times separately. Singapore appears to have made the most headway in this area of building confidence, moderating public fear, when compared to other countries, through dialogues with grassroots leaders and community; briefings for foreign business groups, diplomats, religious groups, trade associations; and employing every type of collateral – posters, booklets, cartoons, advertisements, a SARS rap/ song featured prominently on television; and websites and hotlines.

Earning Confidence and Political Symbolism

Earning the trust and confidence of Singaporeans was by far the more difficult process. It did not come naturally by just being "transparent". The government realised early enough that the acceptance and moderation of fear so characteristic of SARS had to be treated through public communications efforts.

Responding to rising evidence of all sorts of negative social behaviour, earning the trust of the domestic populace took the highest priority. The government had to be seen

taking symbolic measures to reassure the populace. Ministers had to be seen to "walk the talk". When healthcare personnel were demoralised by the actions of some members of the public and taxi drivers who shunned them, Singapore leaders took every opportunity to highlight their sacrifices and paid tribute to their selfless dedication. The media also helped in this effort.

In contrast, in Taiwan, 160 hospital staff refused to cooperate with the government, resigned from their jobs, defied quarantine orders and claimed they were concerned about inadequate infection-control measures.[19] In China, residents went on a rampage and sought to destroy what they thought to be a housing facility for SARS patients. In Canada, nurses claimed that hospital officials dismissed as "overreaction" early warnings by nurses of a SARS outbreak. The nurses also staged a rally to demand a public investigation.

Ministries and agencies also went into full gear with a bewildering range of campaigns and a mammoth exercise in confidence building, as seen in the Environment Ministry's *Singapore's Okay* campaign; the Singapore Tourism Board's *Cool Singapore* campaign; and the *Courage Fund*, which helped the families of SARS victims and healthcare workers. While much effort was taken to recite from the same script, many novel ideas were floated and there was some confusion over logos, slogans and designs.

Rebuttals

Another unusual, indeed unique, step taken was the decision to rebut every negative report in the foreign media claiming that foreign visitors had been infected with SARS while transiting Singapore. It was crucial to prove to all that Singapore, as a responsible member of the international community, did not export SARS to other countries. This required diligent efforts at contact tracing and detailed compilation of data by the MOH, follow-ups through overseas missions followed by rebuttals, some of which were published or aired on television. Press conferences were also arranged to publicise the rebuttals. The government mobilised all available human and technological resources of the police, army, and the People's Association to this end. But it is unclear if this elaborate exercise was effective in the long run.

Outbreak Communications across Cultures

It would be fair to say that the basic principles of communications employed by Singapore, some of it listed in earlier paragraphs, are in line with the best practices adopted by many countries and are as applicable in Singapore as in any other country.

However, critics contend that Singapore enjoys some advantageous circumstances of history and geography. It has been argued that because the evolution of public health campaigns in Singapore's development has been so recent, it has contributed to a culture of citizens willing to accept infringements on individual rights for the greater good of the community.[20] To support this contention, it is noted that Singapore went from being an underdeveloped country with malaria, an unsafe water supply and sewage disposal, widespread infectious diseases, a lower-than-average life expectancy, and a higher-than-average infant mortality to become a developed country with one of the healthiest profiles of any country in Asia within a shorter time than most countries in the world.

Also in line with media criticism, it is often contended that the convenience of geography, i.e., Singapore's smallness, combined with the degree of control over media outlets and a compliant citizenry, helped make Singapore a near-ideal place to contain SARS.

Thus, in the early weeks of the outbreak, the communication strategy adopted by Singapore had to contend with the Western media and their political interpretation of Singapore's public health measures. While the WHO and the International Chambers of Commerce had much praise for Singapore's management of the disease, elements of the world's media focused on Singapore's "harsh", "authoritarian", "ruthless" and draconian" measures in containing SARS. Some examples are worth citing:

> "Authoritarian regimes don't win many popularity contests, but their one selling point is an ability to control their citizens. Singaporeans ruthlessly nipped its SARS problem in the bud with draconian quarantine measures…"[21]

> "…the price of avoiding the dreaded WHO label has come at a high price for Singapore's citizens…There is also constant monitoring of suspected SARS carriers, including electronic tracking of those in isolation – extreme measures the authoritarian government there insists is the best way to combat the continuing threat from the mystery illness…"[22]

A local journalist also lamented that the tough measures implemented promptly by the government – Home Quarantine Orders, the use of electronic tags, and the speedy amendment of the Infectious Diseases Act were possible only in Singapore because it showed "*just how powerful the Singapore Government is, and how few checks exist to curb it*". She went on to argue that she found "*the lack of concern over infringements on personal*

freedoms and privacy perfectly understandable given Singapore's communitarian values, but disturbing nevertheless."[23]

These are contentious issues which can be debated in many ways, depending on where one stands. It could be argued that Communist states like China, with far more authoritarian systems in place, fared badly with their public. While the measures taken by Singapore may have been harsh, the potential threat of extinction of an entire small city-state in an extreme case scenario, made draconian preventive measures rational in the short run. The question as to whether the manner in which Singapore managed information flow during the crisis can be replicated or is applicable to other countries and cultures must therefore remain unanswered for the time being. There are clearly no direct measures of successful outbreak communications. But we know that there are obvious indicators of poor communications, as seen in the subsequent political instability affecting the highest offices in certain countries, like China, the economic cost to countries and also the high levels of public unhappiness.

We can at best only generalise that good risk communications provides the tools to help people make informed decisions. Commenting on media criticism of the harsh measures adopted by Singapore, the then Senior Minister had remarked, "*Let's produce results. Then the public relations will look after itself.*"[24]

US Risk Communications expert Jody Lanard, has commented that one of "*her strongest criticisms of Singapore's SARS communication is regarding its failure to dispel the outside world's stereotypes, in cases where those stereotypes were inaccurate.*"[25] She argues also, after relating many anecdotes of how Singapore leaders managed communications during SARS, that:

> "The anecdotes… are about the extraordinary counter-intuitive ways that Singapore built and maintained trust with its citizens, and with the world. Even Western risk communication experts sometimes wonder if these strategies can 'translate' into many different cultures. The Singapore story suggests that they can."

Enhancements Post-SARS

Singapore's fight against SARS in 2003 was in many ways a full-scale rehearsal for a bioterrorist attack and it highlighted key concerns for national security planners to address. It reinforced the importance of cooperation between government agencies and the public, and the need for timely, clear and open communications. Information management was a critical component of the overall SARS battle plan which, as Defence Minister Teo Chee Hean observed, helped to "*calm the population and to mobilise them in a concerted effort*".[26] Similar observations have been made by a security analyst who stressed that "*going beyond the medical approach to securitizing infectious diseases must become a norm rather than an exception*".[27] The outgoing Australian High Commissioner to Singapore also observed that how Singapore dealt with SARS was a "template" on how to handle a bioterrorist attack and that Singapore's success in defeating the disease "protected Australia" from having to face the problem itself.[28]

During the SARS crisis, the establishment of crisis management groups in the enhanced EG structure, involving inter-agency cooperation, was critical and proved to be a robust and effective mechanism. A SARS task force was also formed by the People's Association in 2003, when the virus hit Singapore. SARS task force teams made up of grassroots representatives distributed educational material on the disease, organised dialogues for residents and helped clean hawker centres. After SARS, the People's Association formed crisis groups in 84 constituencies to tackle emergencies. These groups are being prepared to tackle a variety of national emergencies from collapsed buildings to chemical incidents and the disruption of power and water supply. Their specific responsibilities include giving help, maintaining confidence in the community and hastening recovery.[29]

In many ways, SARS was also a dress rehearsal for the more significant threat of an influenza epidemic and the quick measures taken in the past months are testimony to the experience gained from SARS, as seen in the colour-coded system in place which signals the level of threat Singapore faces from an outbreak of avian flu and appropriate responses.[30] The host of measures taken include state-of-the-art isolation rooms in hospitals, sophisticated disease surveillance systems, antiviral stockpiles, doctors primed to look out for signs of potential illness and systems in place for effective border controls.

SARS was both a health and information issue and a learning experience for all. Singapore's experience demonstrated a simple homespun truth, that providing more information is much better than providing less information. It paid off in the long run.

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