

Outbreak Communication

Best practices for communicating with the public during an outbreak

Report of the WHO Expert Consultation on Outbreak
Communications held in Singapore,
21–23 September 2004



World Health
Organization

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Contents

Acknowledgements v

Foreword 1

Introduction 3

I. The experience 5

The special case of outbreaks 7

II. Best practices based on experience 21

Best practices for effective communication 23

Trust: the foundation of effective communication 27

Announcing early: the most consequential decision 31

Transparency: an inherently political issue 39

Public concerns: diversified but legitimate 41

Planning to meet the challenge 45

Steps forward for outbreak communication 47

Annex: list of participants 49

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Foreword

Severe acute respiratory syndrome (SARS) – the first severe new disease of the 21st century – was a watershed event. It revealed how much the world has changed in terms of the impact that outbreaks can have in a highly mobile and closely interconnected world. During a fortunately brief stay in its new human host, the SARS virus travelled rapidly along the routes of international air travel to infect more than 8,000 people around the world. Of these people, SARS killed just under 800.

The SARS experience was remarkable in at least three ways. It showed that decisive national and international action, taking full advantage of modern communication tools, could prevent a new disease from establishing endemicity. It raised the profile of public health to new heights. And it did so by causing enormous economic damage and social disruption.

SARS primed politicians to understand both the far-reaching consequences of outbreaks and the need to make rapid containment a high priority. SARS also stimulated efforts to find ways to make the impact of the next international outbreak less dramatic.

From 21 to 23 September 2004, WHO convened a meeting to consider the role of public communications during an outbreak. In so doing, WHO sought expert advice on two questions: first, how can communication hasten containment of an outbreak, and second, how can communication help mitigate the social and economic impact?

Since the start of this century, WHO has verified an historically unprecedented number of outbreaks. Changes in the way we inhabit the planet have disrupted the delicate natural equilibrium of the microbial world, and these changes cannot easily be undone. The future looks very bright for microbes. Our job now is to call on and sharpen every available tool – including outbreak communication – to control these outbreaks faster, prevent them when we can, and reduce their impact on human lives, societies, and economies.

Since the Singapore consultation, several events have occurred. During the first three months of this year, WHO detected and investigated 75 outbreaks, of which 62 were verified as being of international concern. Among these is the largest and deadliest outbreak of the rare Marburg haemorrhagic fever on record. Most ominously, the world has moved closer to another influenza pandemic than at any time since 1968, when the last



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It is increasingly difficult to think of an outbreak as having merely national or local significance.

The future looks very bright for microbes. Our job now is to sharpen every tool for fighting back.

of the previous century's three pandemics occurred. In line with the urgency of the present situation, the revised International Health Regulations were unanimously adopted during the May 2005 World Health Assembly.

The communication challenges posed by the Marburg outbreak are similar to those experienced during Ebola outbreaks, and were well covered during the consultation. Because the International Health Regulations have significant implications for outbreak management and reporting, several specific references to new requirements in the Regulations have been added to this report. An influenza pandemic will unquestionably present outbreak communicators with unprecedented challenges. It is my sincere hope that the information in this report will assist in this monumental task.

An unprecedented number of outbreaks

From 1 May 2002 to 31 March 2005, WHO detected and verified 760 outbreaks of potential international concern in collaboration with 138 affected countries. International assistance was requested for more than 70 of these events. For more than 50, international teams were deployed to provide on-the-ground support using expertise from WHO and institutions within the Global Outbreak Alert and Response Network (GOARN).

Introduction

Strategies for health education and social mobilization during outbreaks have been refined in recent years. They are now routinely used by WHO, with support from medical anthropologists, in situations where public beliefs about a disease interfere with outbreak control. Strategies for using the mass media to improve outbreak control are less advanced.

What are the best practices for communicating with the public, primarily through the mass media, during an outbreak? In early 2004, WHO began an effort to identify evidence-based, field-tested communication guidance that would promote the public health goal of rapid outbreak control with the least possible disruption to economies and society.

The first step in this process was an extensive review of the risk communication literature. During this process, WHO identified risk communication components which had direct relevance to outbreaks. This body of material was distilled into a small number of features strongly associated with communication effectiveness or, when lacking, strongly associated with failure.

The next step involved assessing these selected communication features against actual experience during outbreaks. This was one important goal of the Singapore consultation. While a handful of risk communication specialists were among the 85 invited participants, the overwhelming majority were either public health officials from ministries of health with first-hand experience in outbreak response or from WHO's own teams of experienced outbreak responders. WHO selected the participants to represent widely varying economies, political systems, and levels of development. Their experience with specific diseases was also highly diversified.

The report has two parts. The first, devoted to outbreak experience, describes the special case of outbreaks and the many difficult challenges they present for communicators. It also summarizes presentations during the consultation that looked at recent outbreaks in terms of what they have to say about effective communication and the consequences of certain errors. The second part translates these experiences into best practices for communication during an outbreak. Contents are organized around five essential practices for effective outbreak communication identified during the consultation: build trust, announce early, be transparent, respect public concerns, and plan in advance.

Part I

The experience



The special case of outbreaks

Public communications during an outbreak face unique challenges. These derive from several general characteristics of outbreaks, which are further defined by the pathogen and the political, economic, and cultural context in which the outbreak occurs. First, outbreaks are urgent emergencies accompanied by rapid efforts to care for cases, prevent further spread, and bring the outbreak under control. Decisions, often with life-saving potential, need to be made rapidly and actions need to follow promptly, often with support from an informed public. Ideally, such decisions should be based on solid scientific information, but this is made less likely by a second feature of outbreaks: their unpredictable nature.

Setbacks and surprises are common features of an outbreak response. The history of recent outbreaks yields many examples of a sudden surge in cases or spread to another country after an outbreak was thought to have peaked. Such setbacks can arise from a single lapse in infection control at a hospital, a hidden pocket of infection missed by surveillance, smuggled animals, or the simple volume of international air travel. Moreover, rapid mutation and adaptation are the survival mechanisms of the microbial world, which is well-equipped to take advantage of opportunities to maintain transmission, expand a host range, or spread in new ways. New risk groups can emerge, modes of transmission can change, and treatments can fail if drug resistance develops. The speed with which these surprises can emerge is likewise unpredictable. Bovine spongiform encephalopathy existed in cattle for at least a decade before a related new disease in humans was detected. In contrast, during the 2001 outbreak of deliberately-distributed anthrax, the disease behaved in unanticipated ways early on.

As a third feature, outbreaks are usually alarming events that can elicit great anxiety in the general public. This anxiety can endure even when new knowledge about the outbreak is reassuring. The extreme behaviours that can result are well documented and range from the wearing of masks and avoidance of travel, through fear of hospitals and stigmatization of patients and minority groups, to riots, loss of confidence in governments, and significant drops in consumer consumption. Outbreaks thus have the potential to cause social disruption and economic losses well beyond health care costs and out of proportion to the true severity of the risk.

Such public reactions give outbreaks a fourth shared feature: their high political profile. When public anxiety, social disruption, and economic losses accompany an outbreak, it grabs attention at government levels far higher



Outbreaks are urgent emergencies accompanied by rapid efforts to save lives and prevent further cases.

The unique features of outbreaks

- urgent public health emergency
- unpredictable
- alarming for the public
- socially and economically disruptive
- strong political dimensions
- spread has behavioural component
- eminently newsworthy



Outbreaks are usually alarming events that can elicit great anxiety in the general public.

Outbreak control can be severely impeded when officials decide to withhold information or downplay its significance.

– and more powerful – than ministries of health. Such attention can be a major advantage when it brings full political commitment to outbreak control, including adequate resources and high-level support for recommended interventions, even when these are costly and disruptive. At the other extreme, outbreak control can be severely impeded when political authorities, motivated by economic rather than public health concerns, decide to withhold information about an outbreak, downplay its significance, or conceal it altogether. Such a position, which has been all too common in the past, can endanger international as well as national health when the disease has features – non-specific early symptoms or a long incubation period – that allow it to be carried abroad by international air travellers.

All of these features working together give outbreaks yet another shared characteristic: they are nearly always newsworthy events closely followed by the national if not the international press. This media interest has several implications for outbreak control. On the positive side, the media can be used very effectively, especially at the start of an outbreak, to create an informed public, as good reporting translates technical information into lay language and can help the public understand the situation, including its implications for their own health and behaviours. In developing countries, responsible media coverage may be the best way to reach rural residents, in their local language, with key information. This approach has been used successfully in the African setting during recent Ebola outbreaks, where control depended on the total engagement of informed and motivated communities. In addition, media coverage can put those in charge of the outbreak response under close public scrutiny, creating pressure for them to be seen as moving rapidly and decisively to protect public health.

On the negative side, press reports can fuel public anxiety far out of proportion to the reality of the actual threat to health. Exaggerated coverage of an outbreak is far more likely to occur when official information is either absent or considered untrustworthy. In the absence of constantly flowing information from a respected source, rumours will fill the void and take on a life of their own. If officials are not available for comment, reporters will find their own experts and launch their own investigations. Even when the flow of official information is rapid, media competition to be the first to report a new development means that press reports will often pre-empt official communications, placing great pressure on officials to demonstrate that they are fully informed and in control of the situation. Working at its best, pressure from the media can force a government to be

more forthcoming and thorough in its communications about an outbreak. At the same time, however, the unpredictable nature of outbreaks means that officials may be unfairly held accountable when their assessment of the outbreak situation is subsequently proved wrong.

As a final feature, outbreaks are maintained by infectious agents that spread directly from person to person, from exposure to an animal reservoir or other environmental source, or via an insect or animal vector. Human behaviours nearly always contribute to such spread. This behavioural component opens opportunities to identify dangerous activities or populations at special risk and offer protection through advice. In this case, information to the public – whether from official statements or the press – acquires the status of a control intervention with great potential to reduce or interrupt transmission and thus expedite containment. For example, public information about the importance of daily temperature checks, early reporting of fever, and isolation of cases proved decisive in bringing China's SARS outbreak to an end.

These shared features of outbreaks create a complex challenge for public communications in its dual role of expediting outbreak control and mitigating the social and economic consequences. An outbreak is an inherently political event and, in a highly mobile and closely interconnected world, may have significant social and economic consequences internationally as well as nationally. A government may be held accountable by the international community for its handling of an outbreak. Decisions of great interest for the public and the media, and with potentially significant political and economic consequences, need to be made rapidly in an atmosphere characterized by considerable scientific uncertainty and fraught with temptations to issue reassuring messages. The actions of political leaders will be closely scrutinized by the press. Press reports, in turn, will influence public confidence in leaders and colour personal perceptions of the risk. These perceptions can translate into collective behaviours that amplify the social and economic consequences of an outbreak and feed back into political concerns. At the same time, public perceptions of the risk and willingness to comply with recommended measures can play a direct role in the outcome of control efforts.

How, then, can public communications be used as an outbreak intervention that can shape all these competing and interacting forces in ways that favour rapid containment while also mitigating the social and economic consequences? This was a central question addressed during the Singapore consultation.



Outbreaks are nearly always newsworthy events, closely followed by the press. This media interest has several implications for outbreak control.

Working at its best, pressure from the media can force a government to be more forthcoming in its communications about an outbreak.



A disease spread by the airborne route is more frightening for the general public than one that requires close contact with an infected person or animal.

All countries may be tempted to conceal information about an outbreak for various reasons.

More challenges: pathogens, politics, cash and culture

Participants at the consultation related experiences showing how the nature of the communications challenge is further shaped by the pathogen and the disease it causes, and by the political, economic, and cultural context in which the outbreak occurs. Communications surrounding a severe new disease of unknown cause and epidemiological potential will be more difficult than those for an established epidemic-prone disease that recurs according to well-characterized patterns. A disease spread from person-to-person by the airborne route will be more frightening for the general public than a disease that requires close contact with an infected person or animal, as these behaviours can theoretically be avoided. Other features likely to amplify public concerns include high fatality in the absence of a vaccine or cure, a propensity to spread internationally, suspicions that the disease has been deliberately introduced, and an amplification of cases in health care facilities, thus diminishing response capacity when it is needed most. Many of these criteria are reflected in definitions, set out in the recently adopted revised International Health Regulations, of what constitutes a public health emergency of international concern.

The political context further defines the communications challenge. Countries with a democratic tradition, in which politicians are elected and held accountable for their actions and the press enjoys full freedom, will be expected to issue reliable information about an outbreak and keep no secrets – or pay dearly if they do. More authoritarian governments may be less forthcoming with public information but will have the clout to enforce public compliance with control measures and can thus bring an outbreak under control with impressive speed, albeit frequently without regard for public sentiment or human rights. A political culture in which officials regularly collaborate with the media and know how to use them is more likely to maintain public confidence in an outbreak response than a political culture in which the media are distrusted and their work is suppressed.

A country's economic situation will also shape the communications challenge, especially where the early detection and reporting of an outbreak are concerned. All countries may be tempted to conceal information about an outbreak for one reason or another. Poor countries may, however, feel compelled to do so because the consequences would devastate their fragile economies, either through losses in trade and tourism or because of the need to destroy food-producing animals that are the backbone of rural livelihoods. As seen during the recent outbreaks of avian

influenza in Asia, an initial willingness to report openly and fully can fade when the long-term economic consequences of doing so become apparent. In countries with few resources and weak surveillance systems, delayed reporting of an outbreak can result from a simple lack of information at the central level. In an increasing trend, governments in developing countries are receiving their first information about an outbreak from the media, and not from the official reporting system. Other reasons for delayed reporting, common in countries with limited resources, include the absence of laboratory diagnostic capacity to confirm an unusual disease and the difficulty of spotting an unusual event against a background of constant high morbidity and mortality from other infectious diseases. As yet another example, poor countries may see no reason to announce an outbreak and alarm the public when the resources needed to launch a response are simply not there.

Finally, communications may face challenges arising from the cultural context. Given the strong behavioural component of outbreaks, the outcome of control efforts can be influenced by cultural practices and beliefs that either contribute to or interfere with recommended control measures. Some practices and beliefs that increase opportunities of exposure and actually contribute to disease spread may prove very difficult to alter. For example, advice to the public to check for fever or wash hands frequently is much easier to comply with than advice to alter burial and funeral practices strongly governed by tradition. A popular conviction that a disease has a non-medical cause can be a major impediment to control, especially when families conceal patients in homes and refuse to allow medical interventions. The challenge for communicators is even greater when populations are largely illiterate and beyond the reach of any communications technologies, including radios.

Communications during recent outbreaks: errors and successes

Given all these complexities and challenges, it is not surprising that major communication errors have occurred during several recent outbreaks. These errors, and the context in which they occurred, were amply explored by presentations at the Singapore consultation. Several positive experiences with communications during outbreaks were also presented and discussed. Taken as they were from a range of widely varying settings, these presentations further illustrated the impact of different political, economic, and cultural environments on the outcome of outbreak communications.



The outcome of control efforts can be strongly influenced by cultural beliefs and practices.

Given the complexities surrounding outbreaks, it is not surprising that major communication errors have occurred during several recent outbreaks.



In Malaysia, pig farmers expressed a growing undercurrent of scepticism about government announcements and the motives behind them.

Two presentations provided evidence of the formidable challenges faced when populations distrust their government and are suspicious of its motives during an outbreak response. When a government has low credibility, populations tend to question the reliability of official information, the motives behind government actions, and the competence of authorities to safeguard public health. Such a lack of confidence not only undermines compliance with recommended control measures, but can also allow counter-productive behaviours to flourish. It aggravates difficult conditions by diverting the focus away from the need for collaboration and solidarity in the face of a shared threat towards a search for signs of inept management and ways to attribute blame – efforts which find a willing partner in the press. This situation was experienced during a 1999 outbreak of viral encephalitis in Malaysia and a 2004 outbreak of hantavirus pulmonary syndrome in Brazil. In both cases, the difficulties of outbreak control were further compounded by the novelty of the disease; existing mistrust was reinforced in the corresponding atmosphere of scientific uncertainty.

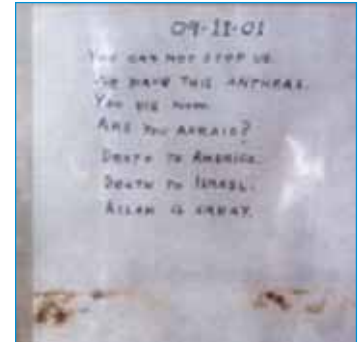
Lack of confidence in a government undermines compliance with control measures and can allow counter-productive behaviours to flourish.

The outbreak in Malaysia marked the emergence of Nipah virus as a newly recognized zoonotic disease causing high fatality in humans. Unfortunately, the disease, which began infecting pig farmers in September 1998, was initially misdiagnosed as Japanese encephalitis, with support from a WHO collaborating centre, probably because diagnostic samples were taken from a person with co-infection. The government announced the disease as Japanese encephalitis and launched aggressive control measures – mosquito fogging of farms, vaccination of at-risk populations – at a cost of millions of dollars, but for the wrong disease. Beneath this show of official action, pig farmers and health workers expressed a growing undercurrent of scepticism: the disease did not behave epidemiologically or clinically like Japanese encephalitis, pig farmers were clearly at greatest risk, and cases were continuing to occur despite the control measures. Suspicions grew that the government was hiding information. Desperate farmers in the initially affected area, who were mainly ethnic Chinese, began selling surviving pigs, often to distant farms, thereby fuelling spread of the disease throughout the peninsula and into neighbouring Singapore. Six months after the initial misdiagnosis, Malaysian scientists isolated the virus, which was subsequently analysed by the Centers for Disease Control and Prevention in the USA and identified as a new pathogen. When this finding was announced, confidence in the government's ability to manage the outbreak was further eroded. Bewildered farmers voiced the view that the government was indifferent to their health and welfare. That view was vividly articulated when the president of the pig farmers' association became infected and died. Altogether, 265 cases, of which 105 were fatal, occurred. The outbreak ended coincident with the culling, by army personnel, of

more than one million pigs, eliminating the livelihood of thousands of farmers. In the aftermath of these events, the government had to invest millions of dollars to regain public confidence and convince its citizens that protection of public health was a high political priority.

Control of the 2004 outbreak of hantavirus in Brasilia, Brazil was likewise impeded by public distrust of the government's commitment to protect public health. Initial investigation of the outbreak faced many uncertainties, as the disease had never before been detected in the area. The media capitalized on this uncertainty, further fed by a suspicious public. Speculation about the reliability of official information and actions continued even after the facts began to emerge. Reporters found their own experts, and these media-appointed experts looked for ways to attribute blame. In such an atmosphere, a frightened public, not easily reassured, behaved in ways that undermined control efforts. Public protests and demonstrations were held. Even though human-to-human transmission of hantavirus is not known to occur, patients faced prejudice and discrimination, and many lost their jobs. People began hunting rats and mice – a behaviour discouraged by health officials as it increased the exposure risk. Tensions between rural residents and the government intensified when a prominent member of the landless peasants movement became infected, further demonstrating the political dimensions an outbreak can assume when confidence in government officials is low.

The public's ability to cope with the uncertainties of an outbreak appears to be more robust when confidence in the political leadership is strong. This was the case during the October 2001 outbreak of anthrax in New York City, which spread through the postal system via mail intentionally contaminated with *Bacillus anthracis* spores. Coming on the heels of the 11 September 2001 terrorist attack on the World Trade Center, the outbreak infected eight New Yorkers, but left the city's population of 8 million people terrified. As the disease spread in unanticipated ways, including via unopened envelopes possibly contaminated when high-speed mail sorters aerosolized the spores, advice to the public needed to evolve in line with emerging facts about the outbreak, and could not be based on the existing body of knowledge about naturally-caused anthrax. Many questions that help a population understand the degree of personal risk and cope accordingly simply could not be answered with certainty. Although the number of cases was small for such a large city, health authorities had to contend with an overload of rumours, hoaxes, and materials requiring laboratory analysis. They also needed to adjust their working methods to those of law enforcement authorities. Despite these challenges, public confidence proved sufficiently buoyant to survive several changes in assessment of the risk. Successful management of the crisis was attributed



Successful management of the anthrax crisis in New York was attributed to strong and highly accessible leadership.

During the hantavirus outbreak in Brazil, speculation about the reliability of official information and actions continued even after the facts emerged.



During the SARS outbreak, anxiety translated into a desire to take personal action, and information shaped this action in a positive way.

The political response to an outbreak can foster a spirit of public collaboration and solidarity that contributes to outbreak control.

to strong and highly accessible political leadership that maintained an impression of being in control of an unprecedented and frightening but manageable situation. Of particular importance were frequent press conferences during which the city's mayor frankly admitted the uncertainties and showed they were of shared emotional concern.

The political response to an outbreak can foster a spirit of public collaboration and solidarity that tangibly contributes to outbreak control, and this contribution was well demonstrated during responses to SARS in Hong Kong Special Administrative Region of China (SAR), Singapore, and elsewhere. SARS was an exceptional disease in many ways, partly due to its severity, the speed with which it travelled around the world, and the great social disruption and economic losses it caused. In areas such as Hong Kong SAR and Singapore, control efforts were made a priority at the highest level of government, as containment of the outbreak was regarded as the only way to restore the confidence of tourists and trade partners and regain economic health. Fortunately, full participation of the public as a partner in reaching these goals was likewise recognized as critical to success, and information was considered the best way to secure this participation. Reporting on the outbreak was frank, open, complete, and constant. As with other newly emerging diseases, SARS delivered many surprises, challenging authorities to provide the right level of assurance for an anxious public when scientific knowledge was incomplete. Authorities in both areas recognized the importance of being accessible and responsive to the media. Reporters articulated the concerns of an anxious public, and replies to the media were then widely publicized in lay language, thus working to promote public understanding of the issues. Such a strategy also promoted public confidence that the government was responsive, deeply concerned, and taking every possible action to end the outbreak quickly. On its part, the public likewise showed it was worthy of confidence. Anxiety translated into a desire to take personal action, and information shaped this action in a positive way. Rapid and reliable official reporting made people receptive to messages about their role in outbreak containment and increased their willingness to comply with recommended measures. Some of these measures – good personal hygiene, frequent temperature checks, restrictions on visiting patients in hospitals – were thought to confer personal protection against infection. Other measures, such as adherence to quarantine, involved more demanding behavioural change and depended on a strong sense of community solidarity and a shared responsibility to conquer the disease and thus return to normal conditions. Mask-wearing probably shared both motives – personal protection and a courtesy to others – and was not considered a signal of public panic in either Hong Kong SAR or Singapore.

The collaboration and solidarity that characterized these responses to SARS were also seen at the international level, to the benefit of affected countries. Networks of world experts worked around the clock, coordinated in real-time by WHO, to identify the causative agent, understand the epidemiology of the disease, improve patient management and verify the effectiveness of recommended control measures. As one authority from Singapore noted, this engagement of outside experts provided another incentive for immediate and open reporting of new knowledge: if mistakes were being made, the international medical and scientific communities would advise the authorities accordingly. It also showed how some of the positive features of a globalized society – electronic interconnectedness, solidarity in the face of a shared threat – could be harnessed for the good of all.

Presentations from China at the Singapore meeting pointed to several mistakes made during the country's initial response to SARS, which emerged in that country in November 2002. Failure to detect the earliest cases was linked to a larger failure to give public health adequate priority and invest in better surveillance and reporting systems. More serious failures occurred when the number of cases became highly visible and both the contagiousness and severity of the disease were apparent. Had Chinese officials sounded the alarm at that point, neighbouring countries could have strengthened their defences against imported cases, and health systems, both within China and elsewhere, could have taken precautions to protect health-care workers and prevent amplification of the disease in hospitals. China did, however, learn rapidly from these mistakes. Many new systems, mechanisms, and ways of dealing with the media and the public, introduced in order to control SARS, have left the country better prepared to respond to other outbreaks of emerging and epidemic-prone diseases. The experiences in China support a further conclusion: when faced with a severe infectious disease that travels easily in a highly mobile world, local actions can have international repercussions; local authorities should be responsible to the international community as well as to their own citizens.

Viet Nam's experience with SARS reveals yet another dimension of the political response to an outbreak. There, the government committed itself to an all-out effort to control the disease when WHO staff convinced officials that local actions would have international significance. The government appreciated that it was dealing with a severe new disease, welcomed WHO support, cooperated fully in the open reporting of cases and prompt investigation of rumours, and became the first country to break the chains



When faced with a severe disease that travels easily, local actions can have international repercussions.

The Vietnamese government committed itself to an all-out effort to control SARS when officials understood that local actions would have international consequences.



During outbreaks of viral haemorrhagic fevers full engagement of the community in understanding the disease and how it spreads is essential for control.

For a highly lethal disease like Ebola, which has no vaccine or cure, information aimed at behavioural change becomes the principal preventive measure.

of local transmission. In so doing, Viet Nam also demonstrated a sense of responsibility to the larger concerns of the international community.

Outbreaks of Ebola haemorrhagic fever are more lethal than SARS and are equally – if not more – frightening for affected populations. Presentations describing recent experiences with Ebola in the Congo and Uganda illustrated some especially difficult communication challenges faced in developing countries. In these outbreaks, public beliefs and behaviours – consumption of chimpanzee meat, washing the bodies of recently deceased patients, and funeral rites involving close contact with the corpse – directly contributed to the spread of Ebola. They amplified the number of cases, interfered with control measures, and made the work of response teams far more complicated. In both the Congo and Uganda, total engagement of affected communities was identified as the key to control. For a highly lethal disease like Ebola, which has no vaccine or cure, information aimed at behavioural change becomes the principal source of protection during the emergency conditions of an outbreak. The challenge, however, was great: to persuade hard-to-reach communities with low literacy to abandon entrenched practices sanctioned by tradition and religious beliefs. Strategies for doing so reached down to the roots of the community infrastructure, using women – at greatest risk of infection because of their role as caregivers – to establish local information networks and tailor educational messages to community beliefs and anxieties. One marker of the magnitude of the challenge is the fact that more than 20% of the work of response teams was devoted to the management of rumours. Response teams also fully engaged the media, who translated technical information into locally appropriate language.

A report on the response to cholera outbreaks in Iran provided further impressive evidence of the impact that culturally appropriate communications, aimed at simple behavioural change, can have on a well-characterized and preventable disease like cholera that recurs, often with devastating results, in a seasonal pattern. In 2000, a new control programme was introduced in Iran based on the premise that populations are entitled to information that affects their lives. Evidence-based communications, founded on transparency and a respect for public concerns, were introduced as part of a preventive initiative that included surveillance, care centres, training, and logistic support. The results were spectacular. In 1999, the country registered more than 11,000 cases of cholera. By 2003, that number had fallen to only 96.

In contrast to the instant emergency that arises when a single case of Ebola is detected, the outbreak of bovine spongiform encephalopathy, or

“mad cow” disease, initially recognized in 1986, was a slow-moving outbreak with enormous economic consequences for the United Kingdom and several other wealthy nations. In this case, the behavioural change was prompt, spontaneous and economically devastating: people stopped eating beef in the initially affected country and elsewhere. The authorities, torn by the dual responsibility of protecting both the food supply and the agricultural sector, responded by issuing reassuring public messages claiming, without adequate scientific support, that consumption of beef carried no risks for human health. This outbreak delivered its major public health surprise a full decade later, when a rare but invariably fatal and apparently related disease emerged in humans. That event created a political crisis. At its heart was a communications strategy that involved concealment, denial, understatement, and bold reassurance unsubstantiated by the scientific evidence. Some government officials paid dearly for this approach. In contrast, when the disease in cattle reached Germany, one part of the country introduced a policy of testing all cattle prior to slaughter. Though the tests were expensive, the investment paid off: consumer confidence in the food supply was restored, bringing a highly favourable economic return on the investment in testing.

Thailand’s experience with avian influenza further demonstrated the political perils that arise when authorities are confronted with a severe disease that affects both humans and an economically important domestic animal. On 17 January 2004, Thailand – the world’s fourth largest exporter of poultry and poultry products – announced the presence of highly pathogenic H5N1 avian influenza in both humans and poultry. The announcement bewildered and dismayed the population, and brought immediate consequences for the economy, tourism, the livelihoods of millions of rural farmers, and the credibility of the government, which had been vehemently denying the presence of this disease in the country. The announcement, made to a national audience, was heard by the international community as well, with dramatic results: all poultry exports were immediately banned. While the government initially floundered in its reporting, the policy changed when authorities realized that the only way to regain poultry trade was to defeat the disease and, through prompt and frank reporting, convince the international community that this had been achieved. Thailand’s experience with avian influenza also raised an important larger question. International concern about H5N1 avian influenza centres on the potential of this disease to ignite another influenza pandemic. Can a developing country be expected to engage in control measures, costing millions of dollars and undertaken partly in the interest of protecting international health, without any outside assistance?



The announcement of avian influenza in Thailand bewildered and dismayed local populations. The international consequences were immediate and devastating.

Thailand’s experience with avian influenza demonstrates the political perils that arise when a severe disease affects both humans and an economically important domestic animal.



Public anxiety can be harnessed by good communication in ways that promote desired behaviours and accelerate outbreak control.

Outbreak communication: have the rules changed?

During discussion of these experiences, several points of consensus emerged. Responses to outbreaks share certain fundamental objectives: to take care of patients, to prevent further cases, to end the outbreak quickly, and to prevent its recurrence. Participants readily agreed that effective communication to the public contributes, either directly or indirectly, to each of these objectives and should be considered an intervention in its own right. Public anxiety and the corresponding desire to take protective action can be harnessed by good communications in ways that promote desired behaviours and accelerate outbreak control. People who are alert to the symptoms of illness are more likely to seek early treatment. Awareness of protective behaviours can help prevent further cases. On a more general level, communications—when done well—builds confidence in national authorities, improves the willingness of populations to comply with recommended measures, and can hasten a return to normal conditions after an outbreak peaks. A favourable public attitude frees those engaged in the technical response to concentrate on rapid containment.

Behaviours conducive to outbreak spread that are influenced by traditional cultural beliefs and practices were recognized as presenting communicators with an especially difficult challenge. The particular challenges in developing countries, especially concerning early and frank reporting, were equally recognized. Many countries first need better surveillance systems before they can be expected to know – and report – that a problem exists. Weak economies further make the almost inevitable economic consequences of an outbreak an important impediment to rapid and frank reporting. Still, participants found many reasons to recommend early and frank disclosure of an outbreak as the most likely way to lessen the long-term social and economic consequences, which are very likely aggravated when faulty reporting results in a loss of national and international confidence in a government. More evidence to support this argument was considered highly desirable. In addition, the political regime and the degree of social cohesion will influence how messages about an outbreak are interpreted. Populations are most likely to comply with recommended measures when trust and confidence in public authorities are high. Given the unpredictable and often explosive behaviour of outbreaks, such trust needs to be built up in advance – in peacetime rather than during the heat of a battle.

Participants also agreed on the inherently political nature of outbreaks. During an outbreak, and especially at its start, public communication is very often a political strategy aiming, at best, to show that a government

A favourable public attitude frees those engaged in the technical response to concentrate on rapid containment.

is concerned, in charge, and determined to safeguard public health. Such a strategy is valuable, as it can create an environment in which the technical work of containment can move forward smoothly without the interference of a mistrustful public or a hostile press. At the same time, control efforts can be greatly impeded by a political strategy that gives priority to the prevention of economic losses and bypasses the advice of public health officials. Participants found some evidence that the temptation to do so is especially strong when an economically important agricultural animal is implicated in the transmission cycle.

Many participants noted that most outbreaks now start with a rumour, picked up and communicated by the media, who can be a powerful ally in outbreak communications, particularly at the start. At WHO, rumours reported by the press now provide the first alert to more than 40% of the outbreaks eventually verified. Conditions in the 21st century's highly mobile, interdependent, and interconnected society may have changed some of the rules for outbreak communication. Under these conditions, it is increasingly difficult to think of an outbreak as having merely national or local significance given the increased opportunities for spread by air travellers and the potential consequences for distant economies. The democratizing power of rapid electronic access to information may also have changed the rules. In the information age, it has become increasingly difficult to cover up an outbreak – media coverage can make outbreaks too big to hide. In the final analysis, truth will prevail: rumours and their investigation by the media will eventually uncover the facts even when the authorities attempt to conceal them. When disclosing information, making information about an outbreak public locally is now equivalent to making it public globally. Moreover, participants agreed that information may be the only source of protection during a public health emergency. Populations have a right to information that affects their lives.

Concerning the early reporting of an outbreak, participants readily agreed that the most compelling motivation is the need to protect public health and expedite outbreak control. Five circumstances were identified as providing especially compelling reasons to report early and openly.

- when avoidable behaviours in the general population are contributing to spread: warn the public
- when a defined risk group, such as health-care workers or rural farmers, is known to be especially vulnerable: alert them to the risk and explain ways to reduce it
- when neighbouring countries may be at risk: warn them to watch out for imported cases



The democratizing power of rapid electronic access to information may also have changed the rules.

Rumours and their investigation by the media will eventually uncover the facts even when authorities attempt to conceal them.

- when the affected country can benefit from collective international knowledge and experience: start the information flow
- when local authorities know they need international assistance: reporting early brings a public expectation that interventions will follow; assurance that these interventions will be made available is a powerful motivation to report.

Part II

Best practices based on experience



Best practices for effective communication

Participants identified five critical practices that influence the effectiveness of outbreak communication. Their ad hoc experiences also supported the hypothesis that when modern risk communication principles are applied, they promote the primary public health goal of rapid outbreak containment with the least possible disruption to economies and society.

1. Build trust

As the foundation for effective outbreak communication, the most critical objective is to build, maintain, or restore public trust in those responsible for managing the outbreak and issuing information about it. This primary importance of trust was found to be true across cultures, political systems, and levels of economic development.

Trust derives from public perceptions of the motives, honesty, and competence of authorities. Public confidence that a government or agency is acting first and foremost to safeguard health will influence compliance with recommended control measures and thus hasten outbreak containment. Trust in the honesty of authorities and confidence that no disconcerting facts are being downplayed or concealed reduces public anxiety during the inevitable uncertainties of an outbreak. Confidence that the authorities are competent and in control further helps prevent reactions that exacerbate an outbreak's social and economic impact.

2. Announce early

Participants were unanimous in their view that early announcement of an outbreak is the best strategy. Since human behaviours nearly always play a role in outbreak spread, early announcement contributes to early containment in a situation where every day counts. Equally important, early announcement wins public confidence that authorities are openly reporting what they know when they know it, setting expectations that information will not be concealed.

For diseases that pose a large and immediate international threat, arguments for reporting early are particularly urgent and compelling. As defined in the revised International Health Regulations, a single case of



Trust in the honesty of authorities reduces public anxiety during the uncertainties of an outbreak.

Early announcement contributes to early containment in a situation where every day counts.



A single case of poliomyelitis, smallpox, human influenza caused by a novel virus subtype, or SARS must be reported immediately.

Transparency has limits, as some information should not be made public for ethical reasons.

smallpox, poliomyelitis, human influenza caused by a novel virus subtype, or SARS must be reported immediately.

The first communication about an outbreak is often the most important. Because of the very nature of outbreaks, the announcement will be a newsworthy item that comes as a surprise, captures media and public attention, and has great potential to alarm. How that initial announcement is handled – when the spotlight is most intense – is likely to colour the reception of all subsequent messages. Delayed announcement of an outbreak creates the impression that officials are concealing information and may be more concerned about preventing public anxiety and loss of income from trade and tourism than protecting public health. The resulting loss of trust, right at the start, can prove impossible to regain.

3. Be transparent

Transparency characterizes the relationship between the outbreak managers and the public. Transparency can be defined as communication that is candid, easily understood, complete, and accurate. In general, greater transparency results in higher trust. Transparency provides many benefits, including showing how even at a time of uncertainty and many unknowns, outbreak managers are systematically seeking answers. Since transparency can also reveal management shortcomings, it provides a strong incentive for deliberative and accountable decision-making. Transparency also has limits, as some information, such as confidential patient data, should not be made public for ethical reasons. The key is to balance such concerns against the public's right, need and desire for reliable information. Establishing the limits of transparency may vary from outbreak to outbreak, but if transparency limits become an excuse for secretiveness, the likely result will be a loss of public trust.

4. Respect public concerns

The public is entitled to information that affects their health and the health of their families. Public concerns should be treated as legitimate, explored, and respected as a force that will influence an outbreak's impact. Early risk communication was didactic, setting out the facts, telling the public how it should react, and then describing any other reactions as "irrational". Today, effective risk communication is viewed as a dialogue between technical experts and the public.

An outbreak gains the attention of many different publics – those at risk, patients and their families and neighbours, the media, researchers, community leaders, trade partners, and tourists – and affects them in many different ways. Outbreak communication works best when the views of all these publics are considered when decisions are made about what to say and how to say it. Once decisions are made, partners should strive to present information in a coordinated and consistent way. In announcing decisions early in an outbreak, the press will be helpful, especially if outbreak management is transparent. But journalists can quickly turn adversarial if they feel they have been deceived.

5. Plan in advance

Planning is essential for effective outbreak communication and yet it is rarely done. Outbreak communication planning must be a part of outbreak management planning from the start. Under the emergency conditions of an outbreak, communication cannot be ideally effective when its principles are considered only at the last minute in the rush to release information. At the same time, however, outbreak communication that is not planned in advance is not necessarily doomed to failure. As noted during the consultation, many countries affected by SARS had no communication plans in place, yet communicated very effectively with the public. Others made major mistakes – and paid dearly; these could have been avoided had the communication issues been considered in advance.

Sent: Wednesday, 11 October 2000 08:09
 To: OUTBREAK@whoafr.org
 Cc: OUTBREAK@who.ch
 Subject: Viral haemorrhagic fever outbreak in Uganda

This is to inform you that there is a possible outbreak of viral haemorrhagic fever in Gulu district. There are several cases reported with 15 deaths including 2 health workers. A team has been sent to assist with outbreak investigations and some protective wear too has been sent.

WHO was immediately notified by email following detection of the first suspected cases of Ebola in Uganda.

Costly errors can be avoided when the issues and principles of risk communication are considered in advance.

Trust: the foundation of effective communication

Participants agreed that the most critical objective for effective outbreak communication is to build, maintain, or restore trust in those responsible for managing the outbreak and issuing information about it. Trust is the foundation of outbreak communication. Built on trust, effective outbreak communication will help speed the control of outbreaks with reduced harm to health, economies, and society.

The consequences of loss of trust were noted repeatedly throughout the meeting and were vividly illustrated in the account of the bovine spongiform encephalopathy outbreak in the United Kingdom. When reassuring messages were proven unfounded, trust in the government plummeted with enormous political and economic consequences. In contrast, the decision in one part of Germany to introduce testing of all cattle restored both trust in the ability of authorities to safeguard the beef supply and the economic health of that industry.

Trust was seen as a fundamental component of outbreak control across cultures. During Ebola outbreaks in Africa, community and religious leaders are used to change public attitudes and behaviours because they are trusted by local populations.

Some noted that even the selection of Singapore as a meeting site was significant, not only because Singapore controlled its SARS outbreak successfully in 2003, but did so with little social disruption. Singapore even enhanced its economic rating during the outbreak. In general, what Singapore did effectively with its SARS communication was to build trust with its own citizens and with other nations during the outbreak.

Participants identified an internal “triangle of trust” within health institutions and agencies that interrelates technical experts, communicators and decision-makers.

- Technical staff should understand the necessity for clear, jargon-free communications.
- Communicators need to understand the need for scientific and medical accuracy, as well as placing scientific knowledge in a political context.
- Decision-makers must accept the necessity of informing people so that communicators are not left facing an information-hungry audience without a response.



Trust is a fundamental component of outbreak control across cultures.

Built on trust, effective outbreak communication will help speed control.



Communicators must show clear awareness of the public's concerns.

Without trust, communications are unlikely to be either convincing or capable of persuading the public to adopt desirable behaviours.

Participants also identified an external “trust triangle” in which government officials, experts and the media interact.

Participants agreed that trust should ideally be in place well in advance of an outbreak. As mentioned previously, trust is better built in “peacetime” than during the hectic conditions of an outbreak. Without trust, communications are unlikely to be either convincing or capable of persuading the public to adopt desirable behaviours.

For both internal and external communication, three elements of trust were identified:

- **Transparency:** Communicators must tell – clearly and early on – what they know, what they don't know and what they are doing. It is essential not to hide relevant information.
- **Accountability:** Communicators must demonstrate that they and their managers are accountable for what is done, said and promised.
- **Listening:** Communicators must show clear awareness of the public's concerns. In practice, this means monitoring the media, and using other methods to understand changing public opinions about the risks posed by an outbreak and the effectiveness of its management.

Trust is also essential between different organizations. The importance of having common assessments among partners in the midst of an outbreak was stressed by some participants, who believe that having conflicting information from various credible sources can damage trust by causing confusion which, in turn, can complicate compliance with control measures.

Can the public – and the media – be trusted?

For effective communication, which aims to establish a dialogue between communicators and the public, trust is essential in both directions. While participants stressed the value of trust placed in public health and other officials, also at issue was the matter of the trust that health and other officials place in the public and in their representatives, the media. How much trust do outbreak managers have that a community can accept the uncertainty and anxiety that are often features of an outbreak, especially in the early stages? What level of trust do outbreak managers have in the community's ability to cope with an outbreak? Evidence indicates that the public rarely panics, even in the face of extremely bad news, yet communication strategies are often designed to prevent panic.

The extent to which the media can be trusted during an outbreak was the subject of lively debate. Scientists and physicians often distrust the media as being more interested in a sensational story than in reporting the facts. For their part, the media often become intolerant when officials are thought to be withholding or distorting the facts. As one participant bluntly stated, officials must never lie to the press; the role of investigative journalism in bringing to light the true magnitude of the SARS outbreak must not be forgotten. Moreover, the media may be used by the public as an excellent source of early intelligence about outbreaks, especially when officials are slow in reporting them.

Even though trust was viewed as essential for effective communication, many participants noted that elevating trust to the highest priority in a communication plan faces many practical barriers. Trust-building methods often involve counter-intuitive measures, such as acknowledging uncertainty or withholding reassurance. Undertaking these trust-building measures often requires the approval of decision-makers who may not be familiar with or confident in the risk communication evidence associated with trust.

Many agreed on the need to secure political support for trust-building measures. Without this, there is a real risk of over-reassurance and of misleading the public by failing to take into account the unknown and unknowable. Participants agreed on the importance of being open with the public and telling them when information is tentative or in the process of being verified.

The question of how to build outbreak communication capacity provoked lively debate in both the working group on trust and in the general discussions. It was felt that WHO might draw on a lesson from the USA, where the Centers for Disease Control and Prevention (CDC) requires that states receiving federal funds for bioterrorism preparedness develop risk communication plans. Similarly, WHO could encourage establishment of professional outbreak communication in ministries of health by including a recommendation to this effect in the International Health Regulations.

MILLIONS WILL DIE FROM BIRD FLU

GENEVA – Health officials have warned about a catastrophic flu pandemic that will sweep the globe, leaving millions of deaths in its wake. As the number of human cases of bird flu in Asia continues to grow, scien-

Health professionals often distrust the media as being more interested in a sensational story than in reporting the facts.

The media often become intolerant when officials are thought to be withholding or distorting the facts.

Announcing early: the most consequential decision

The timing of the first announcement of an outbreak is one of the most difficult decisions facing outbreak communicators. It is also the most consequential. This initial communication sets the standard for what the public can expect from its officials and is therefore likely to shape all subsequent public perceptions of how well the outbreak is being managed. Any suspicions that information which could have reduced the number of cases or saved lives was withheld at the start – especially for political or economic reasons – can do great damage to a country's leadership. Few would question the duty of all governments, whether democratic or authoritarian, to safeguard public welfare when lives are at stake because of an outbreak.

Participants were unanimous in their view that early announcement of an outbreak is highly desirable and fully justified on many counts. They could also cite numerous instances in which reporting was either inadvertently or deliberately late, and many reasons why. At the most fundamental level, health authorities may simply not be aware of an outbreak at its start. Late detection can be the reason for late reporting when the surveillance and laboratory systems are weak, when the disease is new or easily confused with others, or when the disease begins with a mild form and increases its virulence only gradually as more cases occur.

Late detection, late reporting

In the absence of good detection and reporting systems, many outbreaks do not come to the attention of health authorities until a particular event makes them suddenly conspicuous. This can arise when a lapse in infection control in a hospital setting causes a sudden and explosive surge in the number of cases, making the outbreak too big, too concentrated, and thus too visible to be missed. Such a situation has repeatedly been seen with the viral haemorrhagic fevers, including Ebola, Marburg, and Lassa fevers, in Africa and was also true for SARS. For other outbreaks, the trigger for detection occurs when a foreign national – an aid worker or a traveller – becomes infected and an investigation, with good laboratory support, is launched. Countries with limited resources may also miss the start of a new outbreak because all resources are fully concentrated on responding to an existing one. For example, some countries battling SARS missed cases of other epidemic-prone diseases, including dengue and Japanese encephalitis.



The first communication sets the standard for what the public can expect from its officials.

Late detection can be the reason for late reporting when the surveillance and laboratory systems are weak.



If an outbreak causes deaths mainly in young children, the initial cases may be masked by high background mortality in this age group.

New diseases and diseases new to a geographical area may announce themselves with high visibility but prove extremely difficult for any country – wealthy or developing – to diagnose quickly and accurately. Following its first appearance in the western hemisphere, West Nile fever was initially misdiagnosed in New York City as St. Louis encephalitis; the emergence of Nipah virus was initially missed by a WHO collaborating centre. Reporting can also be delayed when the start of an unusual event is camouflaged by the similarity of the symptoms or behaviour of the disease to that of other diseases common in the area. For example, if an outbreak causes deaths mainly in young children, the initial cases may be masked by high background mortality in this age group from other diseases, such as malaria. Also because of similar background “noise”, outbreaks showing “flu-like” symptoms are notoriously difficult to pick up during routine surveillance. In other cases, a new disease may escape the detection system when its emergence, characterized by mild symptoms in a few individuals, is subtle, followed only later by severe disease in many as the causative agent adapts to its new human host or finds new opportunities to spread. For example, when SARS began emerging in southern China in November 2002, it did so with a few short chains of transmission, independent of each other, and few deaths. The outbreak became highly visible following amplification of transmission in municipal hospitals, where patients had been sent for specialized care. Failure to disclose this information immediately is widely regarded as one of the most striking examples of the grave health, social, and economic consequences, for multiple countries, of late reporting of an outbreak. It is also a striking example of how mismanagement of outbreak communication can damage a nation’s political image at the highest level.

Mismanagement of the initial announcement can damage a nation’s political image at the highest level.

Deliberate delays: no excuses

While late detection of outbreaks will no doubt remain a problem as long as surveillance in some countries is weak and new diseases continue to emerge, participants agreed that as soon as an outbreak is detected, the public should be informed. Authorities might be excused for failing to detect the earliest cases in an outbreak, or initially misdiagnosing the cause, but they cannot be excused for failing to make their first reliable knowledge of an outbreak immediately public. When officials are concerned, the public should be warned.

At the other extreme, an outbreak may be detected right at its start, but not announced immediately because of a decision that more details – on modes of transmission, risk groups, or the causative agent – should first be gathered. In this case, delayed reporting may arise from the following common assumption: to inform the public, yet leave them in suspense on important

questions, might cause undue alarm or even panic. Scientists, trained to defer conclusions until the evidence is fully substantiated, may feel uncomfortable supporting an announcement when the facts are sketchy. They may also believe that incomplete information will leave the way open for the press to distort the facts, misquote sources, and sensationalize the story – again resulting in undue public concern as well as damage to professional reputations.

Because outbreaks, as natural experiments, are such unique and unpredictable events, participants found it difficult to compile a list of essential facts about an outbreak that should be in place before information is made public. All agreed, however, that making a formal announcement based only on rumours or anecdotal information would be reckless and that information should not be made public prior to verification of at least some facts. Decisions about which facts should prompt immediate reporting will often be a judgement call, and it should be public health officials, and not those in other government sectors, who make this call, firmly guided by what is best for public health. Some situations would be clear-cut. Declaration of an influenza pandemic, for example, or announcement of a smallpox case, would legitimately launch enormous, costly, and highly disruptive public health responses, in addition – again legitimately – to provoking great public anxiety. In such situations, no one would question the need to be very certain of the reliability of information before making it public. The great challenge is to strike the right balance between the need to ascertain validity before making information public and the consequences that delayed release of information will have for outbreak control and public health. Participants agreed that guidance in making these decisions would be highly desirable.

At WHO, a policy is followed of first verifying an outbreak, according to established procedures, before making information about it public. This policy has proved workable as it rarely compromises the timeliness of an announcement. The median interval between receipt of information about an event and its verification is presently two days. Important events are usually verified in less than 24 hours.

On the question of whether an outbreak should be made public even before the causative agent has been identified, one participant expressed the view that enough is usually known at the start of an outbreak to launch containment measures, and these measures should never be delayed pending identification of the cause. As another participant noted, when a house is on fire, no one waits to discover the origin before calling for help. Had actions to contain SARS awaited isolation of the virus and confirmation of its causative role, the number of cases and deaths and the extent of international spread would undoubtedly have been much greater.



Given the unpredictable nature of the microbial world, participants found it difficult to compile a list of facts that should be in place before information is made public.

Authorities cannot be excused for failing to make their first reliable knowledge of an outbreak immediately public. When officials are concerned, the public should be warned.



Had actions to contain SARS awaited isolation of the virus, the number of cases and deaths would have been much greater.

The temptation to delay making information public or colour it with reassurances may be greatest at the political level.

Unease at the political and scientific levels

The unease surrounding early announcement of an outbreak extends to the political level, where the temptation to delay making information public or colour it with reassurances may be greatest. Like scientists, politicians may feel uncomfortable communicating information that is very likely to provoke questions from the public and press that cannot be answered with certainty. One participant noted that, in many cultures, acknowledging uncertainty may be perceived as a sign of weakness and incompetence in people who are expected to be firmly in charge. Others noted that cultures can change when needed and recalled that for a long time doctors believed it was best to conceal a diagnosis of cancer from their patients. Moreover, communications research supports the view that the public can accept uncertainty and changing assessments of a situation as knowledge evolves, and that a greater risk – loss of public confidence – attends any decision to remain silent for too long. Communication techniques have been developed to address such situations.

Convincing scientists and politicians to accept communication research and techniques may be yet another hurdle. Public health officials, trained in the hard sciences, may view advice from a “soft” science, such as risk communication, with scepticism. Politicians, trained in their own hard school of maintaining power, may make decisions based on how best to survive in a particular political climate. They may not want to risk making announcements that might raise doubts about their competence. As participants noted, some politicians, when confronted by an outbreak, appear to believe that the best tactic is to say nothing and hope that nothing happens. Others may see their role as that of avoiding embarrassment, avoiding problems that will be expensive to fix, and staying in office.

Without question, the documented economic and social consequences of most outbreaks make the stakes for political leaders especially high. In many highly publicized instances, announcement of an outbreak has brought immediate “punishment” in the form of economic losses – often in the billions of dollars – arising from trade bans and an instant drop in tourism. The temptation to postpone such an eventuality is understandable: again, say nothing and hope that nothing happens. Participants felt that this fear of the economic consequences was probably the principal reason for deliberately delaying announcement of an outbreak. Moreover, when government decisions about reporting an outbreak are driven first and foremost by economic concerns, public health arguments may have little persuasive power. As many participants noted, ministries of health usually have less power in government hierarchies than ministries of finance, trade, and agriculture.

Finding the arguments

Convinced of the value of early reporting, participants looked for arguments that might persuade politicians and other decision-makers that early announcement serves their interests best. Economic consequences were considered an especially compelling argument, with SARS providing the most conspicuous example. More evidence showing the direct and indirect costs of late reporting was considered desirable and a suggestion was made for WHO to compile this evidence. Sufficient experience already supports the conclusion that early announcement paves the way for smooth control operations undertaken with support from a cooperative public. Few would question that early intervention increases the chances of rapid outbreak containment and can mitigate the economic damage. Moreover, nearly all outbreaks have a behavioural component. Populations are rarely totally helpless in the face of an outbreak; simple precautions – washing hands, checking for fever, knowing how to handle suspicious mail – can be both personally protective and reassuring. In contrast, risky behaviours that can fuel further spread will simply be perpetuated in an information vacuum.

In the most extreme cases, an outbreak is acknowledged only after it has been made visible by media coverage, forcing authorities to admit, belatedly, what the public already knows or at least strongly suspects. Here, the losses are multiple: lost opportunities to intervene early, lost power to shape protective behaviours, and lost authority to persuade the public to believe future assessments and comply with recommended measures. Forced admission of an outbreak, with all the attendant suspicions of a cover-up, also makes it much harder to reassure neighbouring countries, trade partners, and international travellers that the situation is under control, thus increasing the likelihood of costly and disruptive reactions out of proportion to the real risk.

As many noted, the very assumption that a government can successfully conceal an outbreak has to be questioned in the information age. Given media interest in outbreaks and widespread access to electronic information sources, leaders should be reminded that, in the absence of official information, rumours will fill the void and public anxiety will escalate in the corresponding uncertainty. As one participant noted, fear can have worse consequences for economies and societies than the disease.

An experienced news reporter added to these arguments. Media interest is likely to be intense at the start of an outbreak, and those in charge of the response will be under the spotlight. Early reporting of what is known, followed by frequent situation updates, is by far the best strategy, even if some key facts about the disease are missing. When reporting is delayed,



Early intervention from the global health community can build trust and lessen an outbreak's social and economic impact.

Early announcement paves the way for smooth control operations undertaken with support from a cooperative public.



WHO's ability to provide rapid assistance through GOARN can be a powerful incentive to report outbreaks early.

Early reporting of what is known, followed by frequent updates, is by far the best strategy, even if some key facts about the disease are missing.

suspicions are raised that information is being concealed; concealing information or presenting it untruthfully will not be tolerated by the press. Moreover, early and honest disclosure of information is the best way to gain public confidence, as public views are shaped by media reports. Experience shows that both the media and the public can cope with uncertainties when these are presented in an atmosphere unclouded by suspicions that information is being withheld.

As yet another argument, especially relevant in developing countries, early notification of an outbreak to WHO results in early assistance. The existence of GOARN and its promise of immediate on-the-spot assistance can be a powerful incentive to report early. Close WHO involvement through GOARN brings another bonus: communications about an outbreak from a respected source, such as WHO, can do much to maintain local and international confidence that a situation is under control. For example, during the Ebola outbreak in Uganda in 2000, authorities informed WHO within 24 hours following suspicions of a viral haemorrhagic fever. The first GOARN teams arrived the following day. Both national authorities and WHO issued daily updates on the situation. Though this was the largest and deadliest Ebola outbreak on record, the borders to Uganda were never closed. WHO official communications during the SARS outbreak provide another example, as noted by one participant. Advice on which areas were experiencing local transmission segmented international travel, allowing travel to continue to large parts of Asia. Moreover, when WHO declared an area free of the illness, confidence in this decision brought rapid economic recovery.

Lessons from West Nile fever and anthrax

Two recent experiences from New York City's Department of Health and Mental Hygiene demonstrate two distinct advantages of early reporting: it gets personal protective measures started immediately, and it can reassure the public during an especially frightening situation. In August 1999, when hospitals began seeing unusual cases of a disease with neurological manifestations, epidemiologists determined that the disease was mosquito-borne and initially diagnosed it as St Louis encephalitis. While some officials wanted to wait for more data before making the information public, others argued that a long holiday weekend was coming, the weather was warm, and people would be outdoors. They needed to know that an unusual mosquito-borne disease was spreading and had caused some deaths, and warned to protect themselves against mosquito bites. Even though the diagnosis was wrong – the disease was subsequently identified as West Nile fever – the protective measures were right. In this case, making

information public before all facts were reliably documented was fully justified on public health grounds.

The second experience derived from a small but especially terrifying outbreak of deliberately caused anthrax in 2001. In that event, health officials received the first laboratory confirmation that powder in an envelope addressed to a high-profile personality contained anthrax at 4:00 a.m. on 12 October 2001. Two hours later, an emergency communications meeting was held in which a decision was taken to make the information public immediately. Officials were certain that the media would have the story very quickly; it would be more reassuring for the public if the first news came from the mayor. At 8:00 a.m., the mayor made the first announcement to the press, stating what was known and the many uncertainties that this knowledge brought. That first communication set a pattern of frequent and frank communications with the press that demonstrated firm leadership and helped maintain public confidence despite a number of surprises.

The anthrax incident also illustrates the perils of yielding to the temptation to issue reassuring statements together with the first reports of an outbreak. When a high-ranking US official speculated that the initial case of anthrax in the country was due to a natural cause, he subsequently suffered a loss of credibility and public confidence that was never restored throughout the outbreak.

In New York City, the decision immediately to announce laboratory confirmation of anthrax was facilitated by a pre-existing communication plan that includes the following “rules we try to live by”:

- The first communication is critical.
- Go public quickly even if you have incomplete information.
- Don’t wait for a press release to be written.
- Say what you know, what you don’t know, and what you’re doing.
- Explain that the information may change when you know more.
- Keep talking. Communicate often. Promise and deliver timely, regular updates. Be clear (no jargon) and consistent.
- Despite the urge to say such things as “I want to reassure you...” “Don’t panic...” and “Stay calm...”, don’t say them. Instead, *be* reassuring and *be* calm.
- Be careful about being confident with tenuous information.
- Recognize that even though the risk may be small, people will be frightened.



The first news of the anthrax incident in New York came from the mayor, setting a pattern of frequent and frank communications.

The anthrax incident also illustrates the perils of issuing reassuring statements when an outbreak is first announced.

Transparency: an inherently political issue

From the first announcement of an outbreak through all subsequent communications, decisions must be made about the content of messages: which details must be revealed at a given point in an outbreak and which should be concealed or at least postponed. Should the exact location of a country's first case of BSE in a cow be revealed? Should the place of residence of a SARS patient be made public? Should the first hint that a virus has become more contagious be promptly communicated? Should people be frankly told that all tests have failed to identify the causative agent or, simply, that testing is under way? Such questions are part of the difficult issue of transparency.

A transparent communication is frank, easily understood, complete, and free from deceit. No one would question that transparent communications build trust. Moreover, confidence that officials are transparent in their communications will sustain trust should mistakes be made. Participants readily agreed on the importance of being transparent during an outbreak, but admitted that doing so encountered some complex and difficult political issues.

Like the first announcement of an outbreak, the decision to make subsequent communications transparent is inherently political. As such, transparency encounters two main problems: defining its legitimate limits as a public health strategy, and making sure these limits are not used as an excuse for secrecy or deceit. Participants agreed that transparency has legitimate limits. Not every piece of information that comes to light during an outbreak needs to be revealed. As one participant noted, announcing to aeroplane passengers that the pilot has just died is transparent, but not particularly helpful. Ideally, decisions about what will be revealed and what should be concealed will be based on a careful consideration of what helps the public and what causes harm. While transparency can help rally the public during an outbreak and foster solidarity against a shared threat, it can also have negative consequences, including discrimination against minority groups, and avoidance of certain foods or tourist areas despite negligible risk. Moreover, as one participant noted: how much bad news can be announced without crushing public morale?

Participants reached agreement on some types of information that should not be revealed: unverified rumours, information that has no public health benefits, confidential data on patients, and information that leads to discrimination of patients and their families or ethnic groups.



Transparency can help rally the public during an outbreak and foster solidarity against a shared threat.

Transparency encounters two main problems: defining its limits, and ensuring that these limits are not used as an excuse for secrecy.



Officials often fear that frank, clear, and complete information about an outbreak will come at a high price.

Should the media reveal information deliberately concealed by authorities, the loss of public trust can be considerable.

In reality, however, the far greater impediment to transparency is political and economic in nature: officials fear – often rightly – that frank, clear, and complete information about an outbreak will come at a high price. In this case, the legitimate limits to transparency may be used as an excuse for concealment or deceit. Unfortunately, public health arguments alone are often not sufficiently persuasive to change that view. Participants were convinced that the long-term economic consequences of failing to be transparent are even more costly than the immediate consequences of frank reporting. They strongly suggested that evidence substantiating this point be collected, as it would provide a compelling economic counter-argument. Other barriers to transparent reporting identified included the tendency of spokespersons and public officials to over-reassure, and a fear that the media will exaggerate bad news or interpret uncertainties as a sign of weak outbreak management.

Given the great temptation to conceal alarming – and potentially economically damaging – information, participants stressed the importance of accountability. A good justification for withholding information, based on public health concerns, will be important when the information eventually comes to light. As several noted, the question of transparent reporting may be moot: in an electronically interconnected world in which outbreaks are especially newsworthy events, officials may no longer have the option of concealing information – whatever the reason. This reality provides yet another argument in favour of making outbreak communications as frank, clear, complete, and honest as possible. Should the media reveal information deliberately concealed by authorities, the loss of public trust can be considerable.

Public concerns: diversified but legitimate

Risk communication was created in the midst of mounting public concerns about environmental sources of risks to human health. To address those concerns, assessments of the actual risk were made by technical experts and then announced to the public. This “decide and announce” tactic often failed to convince the public about the true level of the risk. In an effort to be more persuasive, early risk communicators added comparative data to their announcements along the following familiar lines: “Your risk of dying from cell phone use is one million times lower than that of dying from a fall in your bathroom.” This approach was also generally unsuccessful.

Today, risk communicators argue that effective messages are based on an understanding of public concerns – regardless of how unscientific or unfounded they may seem. Risk communication is now seen as a dialogue in which those responsible for issuing information respect public concerns as legitimate, seek to understand their foundation, and then adjust messages accordingly. As noted during the consultation, risk communication is best viewed as a two-way conversation.

Given the menacing nature of outbreaks and the difficulty of clearly defining or predicting risks, public anxiety is fully understandable. Largely drawing on experiences during the SARS outbreak, participants described some ways to tap public concerns as the basis for message development. Some methods of getting a quick read on the public include spontaneous conversations with people on the street, monitoring the media, and engaging reporters in discussions rather than just answering questions. Communicators can identify key opinion leaders and talk to them about community attitudes and concerns as the outbreak evolves. This task is sometimes called “communications surveillance.”

Multiple publics, multiple concerns

Many “publics” will have concerns about an outbreak. These will include populations which are especially vulnerable, populations which have a remote risk but think their risk is high, businesses which could suffer losses during the outbreak, tourists, travellers, trade partners, and the international community. Some participants differentiated between the public at large and stakeholders. Stakeholders, according to some, were intrinsically part of the decision-making process while the “community” was not. Some argued against telling the public anything that was not



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Risk communication is now seen as a dialogue in which those responsible for issuing information respect public concerns as legitimate.



While it is appropriate to target messages to those at greatest risk, it should be remembered that messages to one group are likely to be seen and heard by all.

One important public often overlooked by communicators consists of the critics.

told first to stakeholders. Should a public health decision that all aircraft should be equipped with respiratory masks be made public before airline executives have been informed? Others argued that the public itself should be viewed as a stakeholder; past problems had arisen because legitimate public concerns were not considered in the decision-making process.

One important public often overlooked by communicators consists of the critics. If those with negative views are not engaged by outbreak managers, they will find their outlet in the press. In reality, some critics will go to the press even if they have been brought into the decision-making process. However, if critics are acknowledged early and allowed to voice their views directly to outbreak managers, communicators may, at best, persuade them to soften their criticism or, if not, at least prepare careful counter-arguments in advance.

Should different messages be given to the different publics? Participants agreed that communication has its most direct impact on outbreak control when it addresses the anxieties of those at greatest risk and persuades them to take protective action. Some saw a need for better targeting of messages to groups at greatest risk. For example, urban dwellers have been given information on how to protect themselves from the risk of avian influenza, but the principal message – avoid contact with poultry at live or “wet” markets – will have little relevance to rural residents surrounded by free-roaming backyard flocks, and this is where the true risk of human exposure resides.

While it is appropriate to target messages to those at greatest risk, it should be remembered that messages to one group are likely to be heard by all. Moreover, global communication, combined with the newsworthy nature of outbreaks, means that few messages will remain entirely local. As participants repeatedly observed, any message during an outbreak can be picked up and spread to neighbouring countries and then around the world.

Experience indicates that messages work best when they are consistent and coherent. Consistency becomes all the more important under conditions when a message addressed to one group in one country is likely to be heard by all groups in the international community. When messages are shaped with a particular risk group in mind, their effect on overall public opinion should always be considered. As many noted, message consistency generally worked well during the SARS outbreak, when messages were consistent across national, regional, and international levels. However, that outbreak also revealed the particular challenges that arise when provinces or states are issuing messages that are different from national or international views of the situation.

Another source of inconsistency can come when various government agencies are affected by an outbreak in different ways, and thus assess the risk in different ways. The public frequently makes no distinction between different government agencies and may not understand why information issued by individual agencies may carry a particular emphasis. For example, during the avian influenza outbreak, evaluations of the risk have varied between the agricultural and health sectors: elimination of infection from the commercial poultry sector is good for agricultural recovery, but may be very bad for public health if the disease remains endemic in remote rural flocks.

The myth of public panic

Much debate centred on the issue of potential public panic and ways to avoid it. One participant defined panic as an emotion driving an irrational action, and argued that, even during very severe outbreaks, public panic is rare. A review of the literature reveals that societies have considerable coping skills, especially when confidence in those managing the outbreak is high. In contrast, when messages are primarily driven by the goal of preventing public panic, the tendency to over-reassure – and thus mislead – is great, as is the likelihood that the legitimate reasons for public anxiety will not be addressed. Messages that assure the public there is no need for panic have been shown to actually increase the level of fear, as they leave the following impression: a reason for panic, though not yet here, is nonetheless looming on the horizon.

Pivotal public: the media

Participants acknowledged that the most pivotal public is the media. Again, it was observed that building a good relationship with the media is difficult once an outbreak is under way and is best done in “peacetime”. Participants suggested that routine opportunities for interacting with the media be taken whenever possible. Such interaction, prior to an outbreak, helps technical people better hone their media skills, and it builds good contacts and relationships with individual reporters that may prove invaluable during a crisis.

One participant, who had been directly engaged in investigative reporting during China’s SARS outbreak, provided a window into the media’s thinking during times of crisis. Reporters, too, can become emotionally engaged during an outbreak and are often conscious of their role as participants in a human crisis. They can be motivated by a sense of duty – a desire to improve society and serve the public good. In a time of crisis, information



Experience indicates that societies have considerable coping skills, especially when confidence in those managing the outbreak is high.

The public frequently makes no distinction between different government agencies and their different perceptions of the risk.



Reporters can be allies during an outbreak by translating technical information into lay language easily understood by the public.

The role of the press as “watchdog” exerts pressure on officials to be truthful with the facts and accountable in their actions.

may be the only thing that helps protect the public from harm. For all these reasons, reporters seek to uncover the truth and will not tolerate being misled or lied to by officials.

Reporters can be allies during an outbreak response in two ways: when they translate technical information into lay language that encourages protective behaviours, or when, through investigative journalism, they uncover intelligence that the authorities are trying to hide. However, some reporters are admittedly less trustworthy than others, and communicators can expect to see at least some news sensationalized. Moreover, as several participants noted, the press is often a good ally at the start of an outbreak, but can turn critical of outbreak management later on. On the positive side, the role of the press as “watchdog” exerts pressure on officials to be truthful with the facts and accountable in their actions.

Some general guidelines were put forward to keep the media on track and help avoid sensational reporting.

- Anticipate media needs
- Accept media interviews (or media will appoint their own experts)
- Know which media are reliable and concentrate on getting the story to them
- Adapt messages to different media
- Concentrate on facts and figures, but humanize the situation with metaphors and anecdotes
- Get professional media training

Planning to meet the challenge

Participants agreed that communication should be a component of outbreak response at all stages, and that planning was essential to achieve this objective. One of the most critical tools, but one rarely employed, is an outbreak communications plan. This plan, ideally agreed upon in advance by senior management and political leaders, can provide policy guidance on such difficult issues as the timing of the first announcement and the limits of transparency. It also establishes a chain of command and assigns responsibility for various activities, such as communication with the media and coordination among the different government agencies.

Participants used various experiences and scenarios to illustrate the importance of planning. Well-planned communication was put forward as the most effective intervention at the start of an influenza pandemic, when medical supplies for reducing morbidity and mortality would not be available for the vast majority of populations. In the USA, the response to the deliberate distribution of anthrax suffered at times from poorly coordinated communication. Lessons were learned from that experience, and planning has subsequently been extensive for communication to the public during a possible bioterrorism attack involving the smallpox virus. An emergency communication plan is now in place.

The advantages of a plan

A communications plan should address and answer a number of key questions. What needs to be done? Who needs to know? Who is the spokesperson? What agency has the lead? Who needs to act? Once planning has begun, training becomes an obvious need. For example, have key technical spokespeople received media training? Have communicators had training in critical public health issues? More importantly, do senior managers and policy-makers understand the principles of outbreak communication?

An outbreak communications plan can involve a multitude of professionals and several government agencies. The internal trust triangle – between technical people, communications staff and policy-makers – will work best if trust has been established in advance. Several participants suggested that the current concern about another influenza pandemic would be a good occasion to press for development of a communications plan covering this and other public health emergencies.



A communications plan establishes a chain of command and assigns responsibility for various activities.

Well-planned communication will be the most effective intervention at the start of an influenza pandemic.



If time and resources allow, communicators were encouraged to identify opinion leaders, whose views can be tapped during the outbreak, and to include them as part of the plan. While the media can play a surrogate role in voicing questions the community may share, going to the community directly can provide a sharper image of the public's concerns.

Communicators were encouraged to identify opinion leaders, whose views can be tapped during an outbreak.

Steps forward for outbreak communication

Unfortunately, outbreaks happen, and they will continue to happen. Communication expertise is an essential component of a complete outbreak response. Consequently, further developing outbreak communication will be critical to building better outbreak response.

Several areas were identified for strengthening. The first was people. Some communicators now working in public health agencies should be provided with training in outbreak communication. WHO should advocate for risk communication within both WHO and Member States. Trained outbreak communicators should be integrated among decision-makers.

Skills were another area singled out. The range of applicable outbreak communication skills should be identified. Participants expressed the view that risk communicators should have opportunities for professional development, as well as opportunities to apply their skills in outbreaks. Outbreak communicators should also concentrate on seeing outbreaks through the eyes of other publics. A method should be established to monitor communicators' performances and assure the quality of risk communicators. Opportunities for practising skills in "safe" environments should be promoted.

Outbreak communication tools were also seen to need development. Communication preparedness plans need to be developed. Secure websites and list-serves should be created to move and share information during an outbreak. And evaluation tools need to be developed. Model talking points and frequently asked questions should be created to help guide communicators.

Networks should be created. International organizations should offer outbreak communication support to Member States. A virtual network of senior risk communicators should be developed to provide guidance for problems in specific Member States. Links with the private sector and other stakeholders should be strengthened.

Several funding sources were identified to help meet these needs. They included the World Bank and the regional development banks. WHO was urged to invest more in outbreak communication. National public health authorities and international partners can be mobilized to advocate for outbreak communication needs. Studies could be undertaken to quantify

the health and economic consequences of effective and ineffective outbreak communication. Funding could be secured by writing communication needs into preparedness plans. And future outbreak communication meetings should be opened further to funding bodies.

A representative from the Asian Development Bank said that communication directors should look outside the health field for support. He noted that many institutions have lived through the consequences of SARS and avian influenza, and that those individuals promoting outbreak communication should take advantage of the timing.

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