

Lessons from the pandemic: the need for new tools for risk and outbreak communication

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The influenza pandemic of 2009 revealed shortcomings in the existing guidelines for risk and outbreak communication. Concepts such as building trust proved hard to achieve in practice, whereas other issues such as communicating through the internet and coping with the political fallout of disease outbreaks are not dealt with in existing guidelines. This article surveys the current guidelines and makes recommendations for additional tools and guidelines to be developed in four areas: integrating long-term behavior change models with outbreak communications; research to develop a better understanding of communicating through the internet; research to understand how to use communications to build trust; and developing guidelines and principles to understand the political nature of disease outbreaks.

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On April 24 2009, the World Health Organization (WHO) announced that a previously undetected swine origin influenza virus was causing outbreaks of disease among humans in Mexico and the United States. By the end of August 2010, when the WHO declared the pandemic over, the new virus had spread to more than 214 countries and territories and caused at least 18,449 laboratory confirmed deaths (1). Given that many countries did not have the capacity for laboratory confirmation of deaths or even cases, the number of deaths worldwide is estimated to be significantly higher. In the United States alone, one study has estimated over 12,400 deaths from the new virus (2).

The pandemic was a testing time for the field of risk and emergency communication. Although communications tools and guidelines to deal with disease outbreaks exist, the scope of the pandemic threw up challenges that demonstrated both the usefulness of existing tools and concepts as well as an understanding of their limitations. If one of the aims of communication is to build common understanding between health agencies and the public, then low-vaccine uptake, allegations of collusion between health agencies and the pharmaceutical industry, and allegations that the pandemic was a 'fake pandemic' reflected failures in communication. As one commentator

noted, existing communications guidelines and practices might require 'some pivotal adjustments' after being tested during the pandemic (3).

This article reviews existing tools, principles, and guidelines for communication during pandemics and other disease outbreaks and looks at the gaps in theory and practice that the pandemic has revealed.

In particular, it examines four questions:

- 1) Do existing health risk communication tools, which were designed to meet the needs of disease outbreaks of relatively short duration, work for an event as long and complex as a pandemic?
- 2) What do health communicators need to understand about communicating through a medium as interactive and dynamic as the internet?
- 3) Trust is key principle in risk communications, but we live in what has been characterized as a post-trust society (4). How are public health agencies and governments to build trust in this context?
- 4) Pandemics and other serious disease events are political, social, and economic events, in addition to being public health events (5). What are the key issues that communicators need to understand about the sociopolitical environment in which

communication occurs? In particular, what can we learn from sociological and cultural scholarship into risk perception?

1. Integrating risk and emergency communication with health communication

The two main sources of guidelines and practices for communicating during pandemics and infectious diseases outbreaks are the World Health Organization's Outbreak Communications guidelines (6) and the US Centers for Disease Control and Prevention Crisis and Emergency Risk Communication guidelines and training module (7).

These guidelines are very focussed on emergencies and outbreaks and the special challenges of communication during a period of 'uncertainty, confusion, and a sense of urgency' (6), and communicating effectively 'under nearly impossible time constraints (7).'

The focus on emergencies and crises arose out of specific needs: the experience of SARS, the anthrax attacks in the United States, and the heightened focus on bioterrorism led to the creation of tools and guidelines for situations where health communicators would find themselves as part of a crisis and emergency response (8).

However, an influenza pandemic is more than an outbreak. It begins as an outbreak when the new virus first emerges and starts causing disease at the community level. It then spreads globally over an extended period of time, causing different levels of disease at different places at different times. If the virus is unstable, then patterns of severity could also change with time and location, and changes in the virus could see a pandemic lasting for several years.

The 2009 pandemic showed that communication needs changed over time. The initial need was for clear communication on what the public needed to do to reduce transmission as well as advice on treatment. But as the pandemic progressed, this changed to more complex questions such as the necessity for vaccination and vaccine safety, the need for continued vigilance as well as questions about the quality of the public health response to the pandemic, and questions of accountability, cost, and so on.

These issues were no longer within the realm of emergency or even risk communication. They were rather part of long-term health communication and health promotion, focusing on behavior change in areas such as cough etiquette, hand hygiene, and in wealthier societies on regular vaccination for influenza.

Although there are a variety of approaches to health communication, from the more traditional forms used in the western world, to more participatory, grassroots-based approaches that are often more effective in the developing world, these have never been integrated with risk and emergency communication. The WHO has its

outbreak communication guidelines for emergencies, but it also has a communication for behavioral impact model for health communication and behavior change. This model has used to support leprosy control campaigns in India and Mozambique, dengue prevention in Malaysia, TB prevention in Bangladesh, and Kenya and in other places (9). The United Nations Children's Emergency Fund and the World Bank have advocated similar social mobilization communication strategies (10). Other participatory communication programs for HIV/AIDS have also been described in the literature (11).

During the pandemic, a survey of the needs of developing countries conducted by the WHO and other UN agencies showed many developing countries found communicating at the community level a problem and were requesting support for planning for behavior change communication at the community level (12). This was not an area covered by the existing outbreak and risk communication guidelines.

There, therefore, appears to be merit in trying to combine the longer term, participatory health communication approaches with the more short-term communication principle for disease outbreaks and emergencies, into a broader framework for strategic communication for disease outbreaks.

2. Understanding and effectively using the Internet

This was the first pandemic of the internet age, and it was clear that the web and web-based tools including social networking tools provided valuable channels for communicators to reach audiences.

However, the internet is a challenging medium to use. The internet is unique because it erases the formal distinction between communicator and audience. The creation of blogs and other user-generated content has turned the internet into a conversation space in which everyone can participate, erasing the distinction between expert and lay person, and has created a space in which everyone can publish their opinions and views.

Unlike traditional top-down communication from expert to audience, the internet provides 'alternate lines of knowledge circulation,' where websites and blogs also challenged assessments by experts and authorities (13). Through web sites and blogs, the internet has created a network of virtual communities based on shared interests and values, who communicate among themselves. For example, during the pandemic, environmental and sustainable development groups critical of factory farming created alternative narratives of the pandemic as a consequence of modern farming. (14). Groups suspicious of modern businesses and their influence on politics created narratives in which the pharmaceutical industry influenced perceptions of the seriousness of the pandemic (15).

Existing risk communication guidelines do not provide guidance or principles on the best way to use the internet, particularly social networking tools such as Facebook and Twitter during disease outbreaks as well as for longer health crises. This is clearly an area where evidence-based guidance needs to be developed.

3. Creating trust in a post-trust society

Being regarded by the public as trustworthy is a basic component of risk communication. The WHO and US Centers for Disease Control and Prevention (CDC) emergency and outbreak communication guidelines are based on building a relationship of trust between communicator and audience. Without this trust, the likelihood of the public being persuaded to follow guidance diminishes (16). But, it has been pointed out that public trust in policy makers and officials is declining, at least in western societies. The sociologist Ragnar Lofstedt described these societies as post-trust societies (4). There is little literature on trust in government in developing societies, or societies with different social and political systems, but it is reasonable to assume that low trust in government and institutions is not a purely western phenomenon.

A range of factors have been described in the literature as components of trust. Renn and Levine proposed competence, objectivity, fairness, consistency, and goodwill as making up trust (17). Peters, Covelto, and McCallum proposed knowledge and expertise, openness and honesty, and concern and care as the constituents of trust (18). Lofstedt proposed fairness, competence, and efficiency as the components of public trust.

It is not clear how these various components are to be communicated to the public to build trust. Risk and outbreak communication principles describe displaying empathy with the public and being open and transparent as factors to build trust. But are empathy and transparency sufficient to communicate the varied components of trust listed in the literature? Lack of trust can flow from a variety of factors: lack of belief in the competence and knowledge of authorities, lack of belief in their fairness, lack of belief in their honesty, and so on. The reasons for lack of trust can vary from situation to situation. It is possible to conceive of a situation where lack of trust is based on the perception that the authorities have knowledge and competence, but are not fair and another situation in which the authorities are perceived to be fair and honest, but lack competence. In addition to a general policy of openness and transparency, it is important that communication be addressed to the specific causes for low trust.

Establishing trust is a complex process that requires more than applying guidelines such as openness and transparency (19). A research agenda for risk communication needs to understand the trust building process better

and offer insights from the published literature in various disciplines, as well as suggest new areas for study.

4. The political, social, and economic environment of risk communication

As has been noted earlier, infectious disease outbreaks and other health emergencies are highly charged political and social events (5). Communicating during such events is rarely a simple matter of communicating information clearly and transparently and winning public trust. More often than not, the issues are surrounded by political and economic overtones, requiring political decisions that can create controversy. To take an example, decisions over vaccine procurement, travel restrictions, and other public health measures, all have economic and political consequences, and therefore those who communicate about these issues find themselves confronting questions that are not essentially about health but about other aspects of society.

Therefore, health risk communicators need to draw insights from sociological and cultural studies of risk. The work of the German sociologist Ulrich Beck offers insights into the social and political basis of risk that can offer insights for the communication of risk. In his pioneering work on the Risk Society, Beck described the distribution of technological and other risks produced through the process of modernization as a major preoccupation of modern governments and societies (20). This distribution of risk is never equitable but follows the unequal distribution of power in national societies as well as global society. The struggles over the distribution of risks are a major reason for the differences in the scientific or expert views of risk and the views of different sections of society.

To take an example, a farmer with an outbreak of H5N1 in his farm needs to cull his chicken and ducks if the outbreak is to be curtailed. From the farmer's point of view, though, he is being asked to bear the cost of destroying his livelihood in order to reduce the risk to other members of society. He could well see himself as bearing a disproportionate level of risk, and his compliance with health messages would depend on the extent to which these messages also address the larger issues at the back of the farmer's mind. In this case, the level of compensation for bearing this risk to his livelihood would be a key issue to address if there is to be compliance. Therefore, what might seem a simple public health issue has complex roots in areas that lie outside health, and there is a need to develop tools and ideas that help to deal with these complexities.

Communication during a health emergency or crisis often gets bogged down in questions of blame. Although communicators try to provide the public with information, the public, and very often the media, seem more interested in attributing blame. Mary Douglas' cultural anthropological work has led her to describe risk in modern society as

being part of a politicized ‘blaming system.’ ‘Whose fault?’ is the first question. ‘Then, what action, which means what damages, what compensation, what restitution?’ Risk thus ‘becomes a stick for beating authority (21).’

Based on this, it is necessary for health communication guidelines and principles to be broadened so that they equip communicators to address the underlying social and political questions about blame and risk distribution that are on the public mind during disease outbreaks and emergencies, and to have the tools to be able to respond to these queries.

Toward a research agenda for communication

Following from the earlier discussion, it is suggested that the tools and principles of risk communication be expanded in the following areas:

- 1) The integration of communications tools and guidelines for long-term behavior change and social mobilization, especially in developing country settings, into the existing guidelines for outbreak communication.
- 2) Based on case studies of the experience of the pandemic as well as other disease outbreaks, guidance on how to use the Internet, including social networking tools effectively to provide the public with health guidance.
- 3) Understanding how to build and maintain trust with the public before, during, and after disease outbreaks.
- 4) Guidance on how public health communicators can understand and negotiate the political and cultural complexities of pandemics and other disease events.

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