

EFFECTIVE PUBLIC HEALTH COMMUNICATION IN AN INTERCONNECTED WORLD:

ENHANCING RESILIENCE
TO HEALTH CRISES



FINAL REPORT OF THE ROCKEFELLER FOUNDATION
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SUPPORTED BY



EFFECTIVE PUBLIC HEALTH COMMUNICATION IN AN INTERCONNECTED WORLD:

FRONT COVER, FRONTISPIECE, PAGE 17,
AND BACK COVER. Survivors in Guinea, Liberia,
and Sierra Leone continue to face stigma,
trauma, and long-term effects of the virus
(AP Photo).



ENHANCING RESILIENCE TO HEALTH CRISES

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Search and rescue operations underway
in Port-au-Prince on January 15, 2010
(Photo by IFRC/Eric Quintero via Flickr)

Setting the Scene: Public Health Communication in an Interconnected World

INTRODUCTION



A child receives a vaccination against meningitis at the community center in al-Neem camp for Internally Displaced People in El Daein, East Darfur (Photo by Albert González Farran – UNAMID via Flickr).

The public health communication community has more tools and mechanisms at its disposal than ever before, but we are also facing increasingly complex public health challenges ushered in by globalization, urbanization, conflict, and connective technologies. We are connected in unprecedented ways, but despite this fact there remains a lack of consistent and coherent communication among responders, within health systems and across the public domain.

In light of this persistent problem, KYNE and News Deeply, supported by The Rockefeller Foundation, convened a meeting on *Effective Public Health Communication in an Interconnected World: Enhancing Resilience to Health Crises*, held at the Bellagio Center in Bellagio, Italy, in October 2015. At the convening, 18 experts in communication, public health, and emergency response came together to detail areas of alignment and gaps.

This report seeks to distill those lessons learned and contribute to the research base on public health communication in times of crisis, by detailing key takeaways from the convening. News Deeply also conducted interviews with participants, as well as external reviews with community organizations and leaders, to inform the body of the report. In addition, we have synthesized case studies from three participants across different regional contexts: the 2013–15 Ebola crisis in West Africa, the SARS epidemic of 2003 in Singapore, and the 2015 Legionnaires' disease outbreak in New York City.

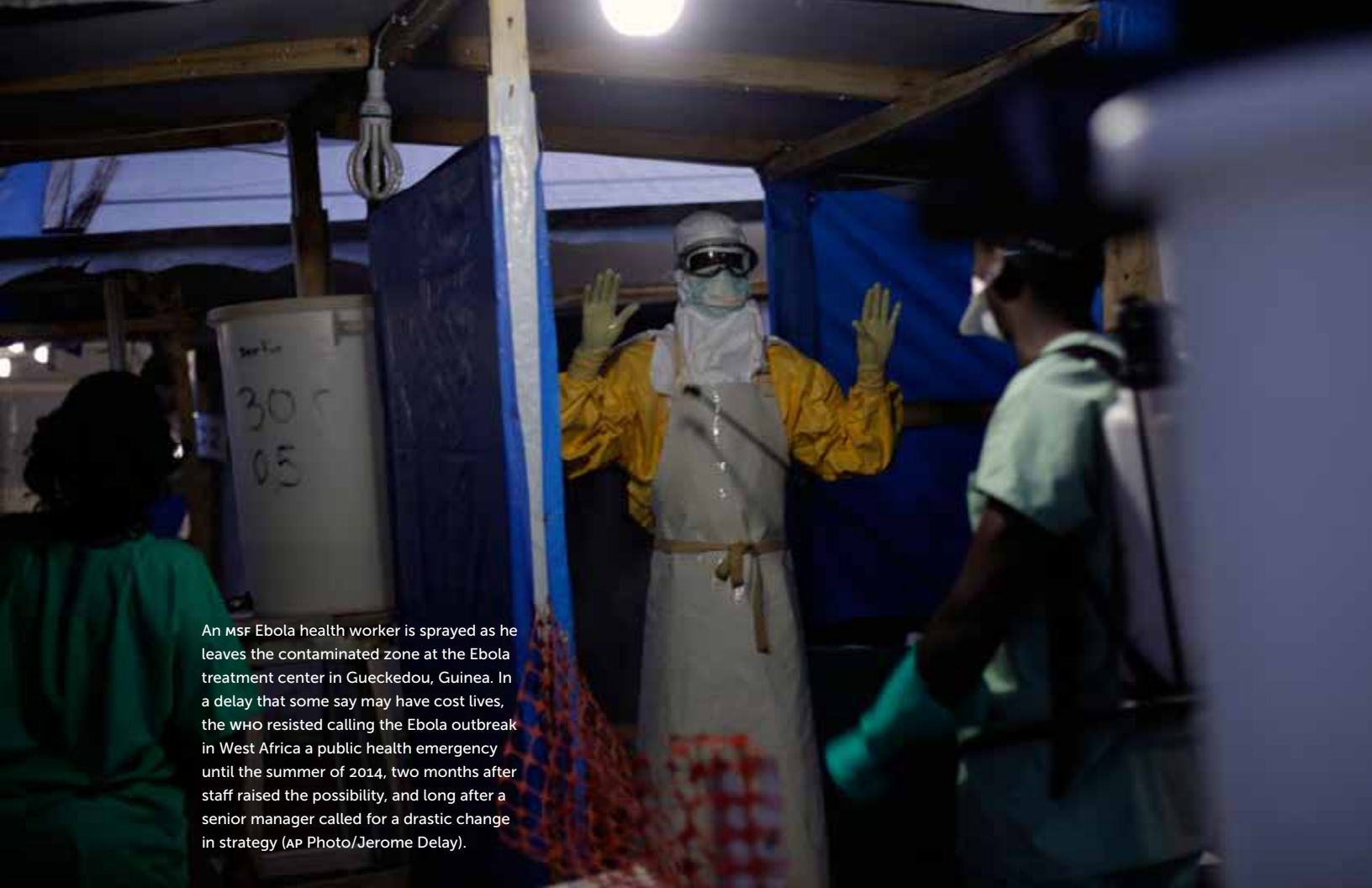
OBJECTIVES OF THIS PROJECT



The Bellagio convening and this report were conceived with a view to developing a consensus on lessons learned during recent public health communication crises, and mapping an innovative way forward. The meeting was designed to:

- **Bring together** 18 public health communication experts over the course of three days, in order to facilitate honest information-sharing and the distillation of lessons learned from communication during previous outbreaks and public health crises.
- **Establish consensus** around best practices in public health communication and align on the critical areas of need and opportunities for improving communication.
- **Develop strategies** to address barriers to and drivers of successful implementation of best practices in public health communication beyond NGO/humanitarian agencies and inclusive of potential new tools or approaches.

ABOVE. A member of the ambulance team sprays down a vehicle with chlorine, in the village of Nedowein, Liberia in June 2015. The village was the site of a flare-up of Ebola in which a 17-year-old boy died (Photo by Kate Thomas).



An MSF Ebola health worker is sprayed as he leaves the contaminated zone at the Ebola treatment center in Gueckedou, Guinea. In a delay that some say may have cost lives, the WHO resisted calling the Ebola outbreak in West Africa a public health emergency until the summer of 2014, two months after staff raised the possibility, and long after a senior manager called for a drastic change in strategy (AP Photo/Jerome Delay).

- **Mobilize** public health communication stakeholders to commit to and begin implementing strategies to improve communication during future responses.

This report, which is based on the proceedings in Bellagio, aims to synthesize the shortcomings of public health communications during recent crises, systematically documenting lessons learned and confronting the barriers to their application. In equal measure, it aims to begin a conversation on how to improve the performance of public health systems, in the sphere of

communications and public engagement. We hope these findings will become integral to the public health communication community's approach during future emergencies.

This report aims to address the shortcomings of public health communications during recent crises.

ABOUT KYNE AND EBOLA DEEPLY



KYNE is a health communication consultancy that cultivates ideas, insights, and influencers to improve lives. We strive to break down silos, bringing together stakeholders from the private, nonprofit, and government sectors to leverage their collective strengths and develop creative, comprehensive solutions. We have designed, organized, and facilitated convenings both large and small for clients across sectors, including the CDC Foundation, Johns Hopkins University Center for Communication Programs, Boehringer Ingelheim (BI), and Biogen. These have included messaging workshops, cross-functional team brainstorming, and patient advocacy summits.

When Ebola struck West Africa, KYNE saw the need to combat mistrust of healthcare workers and coordinate disparate communication efforts that were leading to misinformation. In partnership with the CDC Foundation, we launched a global team of soccer stars, celebrities, and international health bodies to provide critical education and solidarity to those affected. The campaign includes compelling public service announcements, including “[We’ve Got Your Back](#),” developed in collaboration with health workers in-country. All materials are available for free use, helping to ensure coordinated and consistent communication.

EBOLA DEEPLY

News Deeply

Ebola Deeply is an independent digital media project led by journalists and technologists that explores a new model of storytelling around a global crisis. Our goal is to build a better user experience of the story by adding context to content, using the latest digital tools of the day. Over time we hope to add greater clarity, deeper understanding, and more sustained engagement to the global conversation. Ebola Deeply is part of News Deeply, a new media startup and social enterprise that works to advance foreign policy literacy through public service journalism. Our client partners include the World Economic Forum, Columbia University’s Graduate School of Journalism, and the Baker Institute at Rice University.

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THIS PAGE AND PAGE 14. An Ebola cemetery in Disco Hill, Liberia, where the remains of thousands of victims are buried (AP Photo).

The High Stakes of Communication Failures



"The right message
at the right time
from the right person
can save lives.
When we don't have
these three things
together, people die."

– Dr. Barbara J. Reynolds

Senior Advisor, Crisis and Risk Communication,
Centers for Disease Control and Prevention (CDC)



Digital solutions and scientific technology such as genome sequencing and epidemiological advances are enabling the public health community to detect outbreaks with increasing speed. Public health communication, however, is not keeping pace. Whereas a proactive and effective communication strategy can enhance the public health response, a slow or fragmented response can cost lives. Misunderstanding, miscommunication, and deliberately false information can spread more rapidly than the disease itself. During the Ebola outbreak, rumors about the disease moved through local communities, from one town to another, and misinformation permeated throughout the regional and global press. The global public health system needed a coordinated approach to communication, one that rests on trusted networks of actors at the local, regional, and global level.

The Ebola outbreak made it clear that global health stakeholders need to build a more proactive and collaborative strategy toward communication, particularly in times of crisis. To forge a better way forward, those stakeholders must collect and deploy existing best practices, and develop innovative new approaches to public health communication in a world of “always on” media and connective technologies. This requires research into what has worked in the past, alongside a continual assessment of the strategies and methodologies used in the field.

In the wake of the Ebola outbreak and the epidemics that came before it, there must be a paradigm shift in the approach to public health communication; we must move from the fragmented, just-in-time communication model of today to a more proactive system that is ready and resilient when emergencies strike.

PREVIOUS PAGE AND ABOVE. The emergency department at James Davis Jr. Pediatric Hospital in Paynesville, Liberia. Ebola exposed the weaknesses in West Africa’s health systems and clinical infrastructure (Photo by Kate Thomas).

How Communication Can Help or Hinder a Response



To highlight the ways in which communication can help or hinder a public health crisis response, we examine three case studies outlined at the Bellagio convening.

Each case study details best practices, challenges, results, and lessons learned, providing insight into applicable, scalable actions that could leverage public health communication during future crises.



i. Case Study— Ebola in West Africa: BBC Media Action

The Ebola outbreak in West Africa was the worst hemorrhagic fever pandemic in history, with more than 28,000 cases and more than 11,600 deaths. Faced with a crisis of information, **BBC Media Action** mounted one of the first and largest communication responses to the outbreak. The organization began its work in Sierra Leone, through an existing network of partner radio stations, and later launched efforts in Liberia and Guinea, providing capacity-building activities to local journalists.

PREVIOUS PAGE. A District 13 ambulance carrying six suspected Ebola patients rushes through traffic toward the Island Clinic ETU in Monrovia, Liberia (AP Photo/Jerome Delay).

ABOVE. A man sick with Ebola clings to the back of an ambulance as he arrives at the ELWA MSF ETU in Monrovia, Liberia (AP Photo).

TASK

As the outbreak expanded, BBC Media Action moved fast to set up effective community-level outreach strategies. Its work was grounded in anthropological research and a solid understanding

CASE STUDIES



of civil society and information needs in Sierra Leone. The organization had been working in Sierra Leone for 10 years before the Ebola outbreak, and was therefore well placed to communicate with the public from a position of trust. That trust also extended to Liberia, where the BBC's brand awareness helped accelerate new partnerships.

"When we reached out to local community radio stations in Liberia, we got an incredible reception from them and they were very accepting of us," said Yvonne MacPherson, BBC Media Action's USA director and a Bellagio participant. "When we probed why, they said the BBC was there for the country during the war and they trusted the BBC during that difficult time."

As a result, BBC Media Action was able to negotiate broadcast partnerships throughout the country, and BBC Media Action's Ebola programs were aired about 90 times a week via 22 radio stations, including the two largest broadcasters in Liberia. In Guinea, by comparison, the organization was unknown, making broadcasting deals more difficult to negotiate. Building trust, as BBC Media Action learned, was vital to setting up and maintaining operations in the crisis.

ACTIONS

The cornerstone of BBC Media Action's programming was a weekly discussion program, initially produced in Krio for Sierra Leone, and in Liberian English for Liberia. It featured expert interviews and audience call-ins with trusted public figures, designed to provide information and interaction with audiences. It also acted as a platform to hold governments and responders accountable.

The program was rolled out through a network of 90 radio broadcast partners in the region, and a Liberian English version was also initiated, called "Kick Ebola From Liberia." In addition to the weekly discussion program, BBC Media Action decided to use the power of drama, harnessing its ability to portray the challenges people face during an outbreak and state of emergency. MacPherson's team developed a serial program called "Mr. Plan-

“What WhatsApp was brilliant at doing, was giving us a window into what ordinary people were talking about.”

Plan and the People,” which was subsequently produced in nine local languages across Sierra Leone, Liberia, and Guinea.

BBC Media Action also used the mobile chat messaging service WhatsApp, on a scale never seen before in any global health emergency. WhatsApp is the biggest chat application in use in Africa, in part because of its flexible functionality; users can communicate via images, audio, and video, as well as by text. The platform gave the BBC special dispensation, lifting the limit for a broadcast group beyond its usual cap of 250 people.

At the time, the BBC had been drawing upon content from the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), and UNICEF, sharing it with the BBC’s 20,000-plus subscribers, most of them based in West Africa. BBC Media Action built upon this idea, creating localized versions of the service designed to reach some of the 14,000 WhatsApp users in Sierra Leone.

“What WhatsApp was brilliant at doing, was giving us a window into what ordinary people were talking about, what questions they had, and what rumors were going around,” MacPherson said. “They would text us or record their questions and we’d respond, as well as decide which questions or myths needed to be addressed on the radio discussion program. What was really useful about this is that unlike, say, an advertising campaign, we followed the crisis as it was happening, meaning that each week we were talking about what needed to be addressed at that time. As we all know, concerns change and evolve as the weeks and months go by.

RESULTS

MacPherson said that the interpersonal aspect of Mr. Plan-Plan – that is, the creation of a character to whom people could relate and with whom they could engage – amplified its impact. “One of the things we aim to do through our creative content at BBC Media Action is to cut through the clutter of what else is on, creating discussion. We have done many studies and structural equation modeling around the role that discussion plays in behavior change. We were told by so many of our radio partners that our drama had become the talk of the town, and we knew that kids would sing the jingle and ask each other if they had a plan.”

By the time
Sierra Leone was
declared Ebola-
free in November
2015, BBC Media
Action had trained,
supported, and
invested in more
than 25 local radio
stations in the
affected countries.

MacPherson said the impact data showed that Mr. Plan-Plan was a motivating force in encouraging people to talk to their families and make a plan. But there were, of course, challenges in collecting that data. BBC Media Action relied on mobile phone polls to collect impact data in Liberia, given the lack of freedom of movement to conduct the organization's usual methods of random household representation surveys. The mobile phone polls were still successful; 74 percent of Kick Ebola From Liberia listeners surveyed said they were comfortable buying food from Ebola survivors after listening to the show. Focus groups also harnessed similar data.

As MacPherson said, "Getting robust impact data in the middle of a health crisis is certainly a challenge. We don't really know, with good social science rigor, what exactly worked and why. There is data on change, but the rigor is not there that enables anyone to attribute their intervention to achieved outcomes overall."

By the time Sierra Leone was declared Ebola-free in November 2015, BBC Media Action had trained, supported, and invested in more than 25 local radio stations in the affected countries.

LESSONS LEARNED

The team at BBC Media Action learned a great deal about good working practice in the midst of an emergency, including the importance of building links among local media and community leaders, health experts, religious leaders, traditional leaders, and civil society organizations. BBC Media Action is a part of the Social Mobilisation Action Consortium (SMAC), a major consortium of several agencies that provided information about Ebola via different channels, including media, through existing local community structures. MacPherson said that belonging to SMAC helped BBC Media Action coordinate more smoothly mass media outputs with social mobilization activities.

"The content of our programs was linked to social mobilization activities by partners working at the community level," she said. "For example, we worked with our community partners to establish the trusted sources that would feature on our radio discussion programs. And our drama was loaded onto the phones of 1,000 social mobilizers in Sierra Leone, who would play them as part of their communication activities."

Another lesson learned was the importance of investing in local media as equal partners, particularly in rural and remote areas.

CASE STUDIES



EBOLA IN WEST AFRICA: LESSONS LEARNED

- *Positive, actionable two-way communication is key to results, and local media should be treated as equal partners.*
- *Using trusted experts combined with positive and actionable advice builds audience trust.*
- *Interpersonal discussion amplifies the impact of content for local audiences. Creating characters to whom audiences can relate and with whom they can engage is another key factor in building trust.*
- *Social media can be highly effective at giving audiences a voice and enabling programs to address emerging issues in a timely manner.*
- *Coordinating with social mobilization efforts ensures that communication is in tune with the response.*

"They have the communication skills and are trusted by local audiences," said MacPherson. "Often, outside organizations come in and expect radio partners to do 'something for nothing' and see them as a broadcast platform. That relationship is often defined by either asking them for free airtime for content that's been produced elsewhere, or the reverse scenario is paying them to say what you want them to say. This approach does not respect them as partners nor build capacity in any way."

The importance of localization and two-way communication in different languages was key for the BBC Media Action team. "This seems an obvious point, but it really doesn't happen often enough," MacPherson said. "There was huge demand for our content to be produced in local languages," she added. "In Sierra Leone, for example, the majority of our content is in Krio, and we produced the radio drama in Krio and then had requests from our district partners to produce in other local

languages." That resulted in the drama being rolled out in five languages in Sierra Leone alone.

MacPherson added that localization can contribute to improving the responsiveness of local health services, as well as for health communication. "When local media is free to expose gaps in service delivery from both government and NGOs, problems are often resolved more quickly."



ii. Case Study – Managing SARS in Singapore

In November 2002, an outbreak of severe acute respiratory syndrome (SARS) was reported in China's Guangdong Province. Within a year, cases had spread to Hong Kong, Vietnam, Taiwan, and Canada. SARS hit Singapore even before the syndrome had a name. In March 2003, it entered the hospital system when doctors

diagnosed three women who, after returning from Hong Kong, developed atypical pneumonia. In real numbers, SARS caused only a few hundred deaths worldwide; in Singapore there were 33 deaths in total. Yet it sparked a widespread panic, as the first pandemic of the 21st century. It also served as a significant test of global public health infrastructure and communication systems.

ABOVE AND PAGE 20. A masked Singaporean security guard checks people in front of a video temperature sensor at the Tan Tock Seng Hospital where all of Singapore's SARS cases have been treated Tuesday, Sept. 9, 2003 in Singapore (AP Photo/Ed Wray © [2003] The Associated Press).



TASK

In the early days of SARS, in November 2002, Singapore's Ministry of Health monitored the spread of the disease in Hong Kong, and especially the protracted saga of Amoy Gardens, a housing facility at the center of the outbreak. They were well aware of misinformation circulating in the media cycle: critical reports alleging cover-ups and underreporting of probable cases, fueled by a lack of transparency by some governments. They studied possible scenarios, anticipated problems, and worked to avoid the more obvious pitfalls, said Dr. K.U. Menon, senior consultant for Singapore's Ministry of Communications and Information.

At the start of the outbreak, Singapore alerted the World Health Organization (WHO) that a Singaporean doctor onboard a Singapore International Airlines plane was suspected of having SARS. The need for transparency and an immediate response was seen as paramount.

ABOVE. A masked Singaporean nurse enters the outpatient ward of the Singapore General Hospital Tuesday, Sept. 9, 2003 in Singapore (AP Photo/Ed Wray © [2003] The Associated Press).

"We were well aware of the potentially negative impact of [publicizing] this incident, but the protection of public health overrode all other considerations," said Menon. "Singapore's

CASE STUDIES



disclosure allowed WHO to take prompt action and issue an emergency travel advisory on the same day, March 15, 2003. In the same vein, a WHO representative sat in during the daily conference chaired by the director of medical services and he had access to the same raw data from the epidemiologists and clinicians as Singapore officials. We made it

abundantly clear that we had nothing to hide.”

ACTIONS

Singapore’s response was based on a traditional public health measure called a “cordon sanitaire” – a quarantine measure, or barrier, between healthy and ill populations to decrease the risk of communication. It was inspired by old-fashioned forceful methods used during epidemics in earlier centuries, such as physical quarantine. It is also noted in the Centers for Disease Control and Prevention (CDC)’s ring-fencing strategy for containing an epidemic. The speedy amendment of the Infectious Diseases Act in Singapore’s parliament gave the government the teeth needed to enforce strict quarantines and other measures.

“Singapore excelled at being the most aggressive in instituting traditional measures against SARS – it was the first country to designate a SARS-dedicated hospital; the first to initiate quarantine at home for those who had close contact with SARS cases and introduce the thermal scanners and undertake contact tracing in a big way,” Menon said. He also noted that the country benefitted from early media reporting on SARS in Southern China, sending a team from Hong Kong to learn from the response and challenges faced there.

Singapore’s Ministry of Defense deployed complex software systems to manage a contact tracing and epidemiology database. “This was something we took very seriously; and in fact, more than 200 soldiers, including full-time young national servicemen, were deployed to support the Ministry of Health to help with the individual contact tracing of every individual suspected of having SARS,” Menon said. “Contact tracing involved also tracing individual

On May 30, 2003,
three months
after the first
case, the WHO
declared Singapore
SARS-free. China
was not declared
free of SARS until
May 2004.

visitors suspected of contact with SARS from airport to the hotel to the shopping mall. Another decision we took was to close schools even though the science did not support that argument.”

“We have very tightly controlled entry and exit points, but our smallness and urban density also increased the danger of spread of an infectious disease beyond the hospitals into the community. So we tackled SARS rigorously, leaving nothing to chance,” he said.

“Fear was overwhelming. Earning trust and confidence became a high priority. We had to get the Singapore population on our side at all costs,” Menon said. The government used a variety of media formats to encourage people to wash their hands, wear their facemasks, and take other self-protection measures.

“We also initiated a wide range of confidence-building campaigns. We even had a dedicated SARS TV channel, which we set up over [the course of] a week. We worked on the principle that we had to make the information available to everyone at all times of the day, whether or not they looked at it.”

In parallel, the government launched a proactive communication effort to educate the public and encourage behaviors that would prevent the spread of the disease. As public health practitioners later recounted in an article published by *Health Promotion International*,¹ the Singapore government took time in the midst of the crisis to conduct a survey “to assess Singaporeans’ knowledge about SARS and infection control measures, and their concerns and anxiety in relation to the outbreak.”

Although the Singaporean government won praise from the WHO for containing SARS, it received criticism from the international media for the extreme home quarantine measures that it put in place. Measures were taken to ensure compliance of 10-day home quarantines for some 750 people through the use of webcams and electronic tracking devices. “We also introduced the Infrared Fever Screening System ... better known as a thermal scanner,” Menon said. “It gave a major psychological boost to public morale and the sense that the disease could be stopped at our key border points of entry.”

1 M. Deurenberg-Yap, L.L. Foo, Y.Y. Low, S.P. Chan, K. Vijaya, and M. Lee, “The Singaporean Response to the SARS Outbreak: Knowledge Sufficiency Versus Public Trust,” *Health Promotion International*, vol. 20, no. 4: 320.



The government's survey, later published in *Health Promotion International*, assessed public attitudes toward the strict measures in place to control the disease. Its results showed that ">80% of the public agreed that the preventive and control measures instituted were appropriate ... with >93% of adult Singaporeans indicating that they were satisfied or very satisfied with the government's response to SARS."²

As cases fell, the Singapore Tourism Board launched the "Cool Singapore" program, a measure aimed at calming the public and reassuring visitors to the country. The program created mandatory temperature checks for employees at hotels and other public facilities, granting those who passed a sticker that read, "I'm Cool" – a signal that they were SARS-free. It formed the bedrock of a government effort to restore tourist and consumer confidence in Singapore.

On May 30, 2003, three months after the first case, the WHO declared Singapore SARS-free. China was not declared free of SARS until May 2004. So just what was it about Singapore's response that enabled it to contain the disease so quickly and effectively? And how did communication play a role?

ABOVE. Hospital staff work at the Tan Tock Seng Hospital Wednesday, Sept. 10, 2003 in Singapore (AP Photo/Ed Wray © [2003] The Associated Press).

2 Deurenberg-Yap et al., "The Singaporean Response," 324.

THE SIX PRINCIPLES OF CRISIS AND EMERGENCY RISK COMMUNICATION, OUTLINED BY THE CDC

- **Be first:** *If you have the authority to provide accurate information, do so as soon as possible. If not, explain how you are working to get it.*
- **Be right:** *Give facts in increments. Tell people what you know, when you know it. Communicate what you don't yet know and say if you will have relevant information later.*
- **Be credible:** *Tell the truth. Do not withhold to avoid embarrassment or the possible panic that seldom happens. Uncertainty is worse than not knowing; rumors are more damaging than hard truths.*
- **Express empathy:** *Acknowledge in words what people are feeling: it builds trust. Recognize uncertainty and questions still unanswered.*
- **Promote action:** *Give people things to do. It calms anxiety and helps restore order.*
- **Show respect:** *Treat people the way you want to be treated, always, even when hard decisions must be communicated.*

"We adhered to all the basic rules, the fundamentals of good governance," Menon said. "That's to say, good and active communication, openness, transparency, demonstrating action and progress, treating people's concerns very seriously, ensuring that authoritative sources delivered the same messages, framing announcements and responses to provide context, and encouraging and enabling self-responsibility."

LESSONS LEARNED

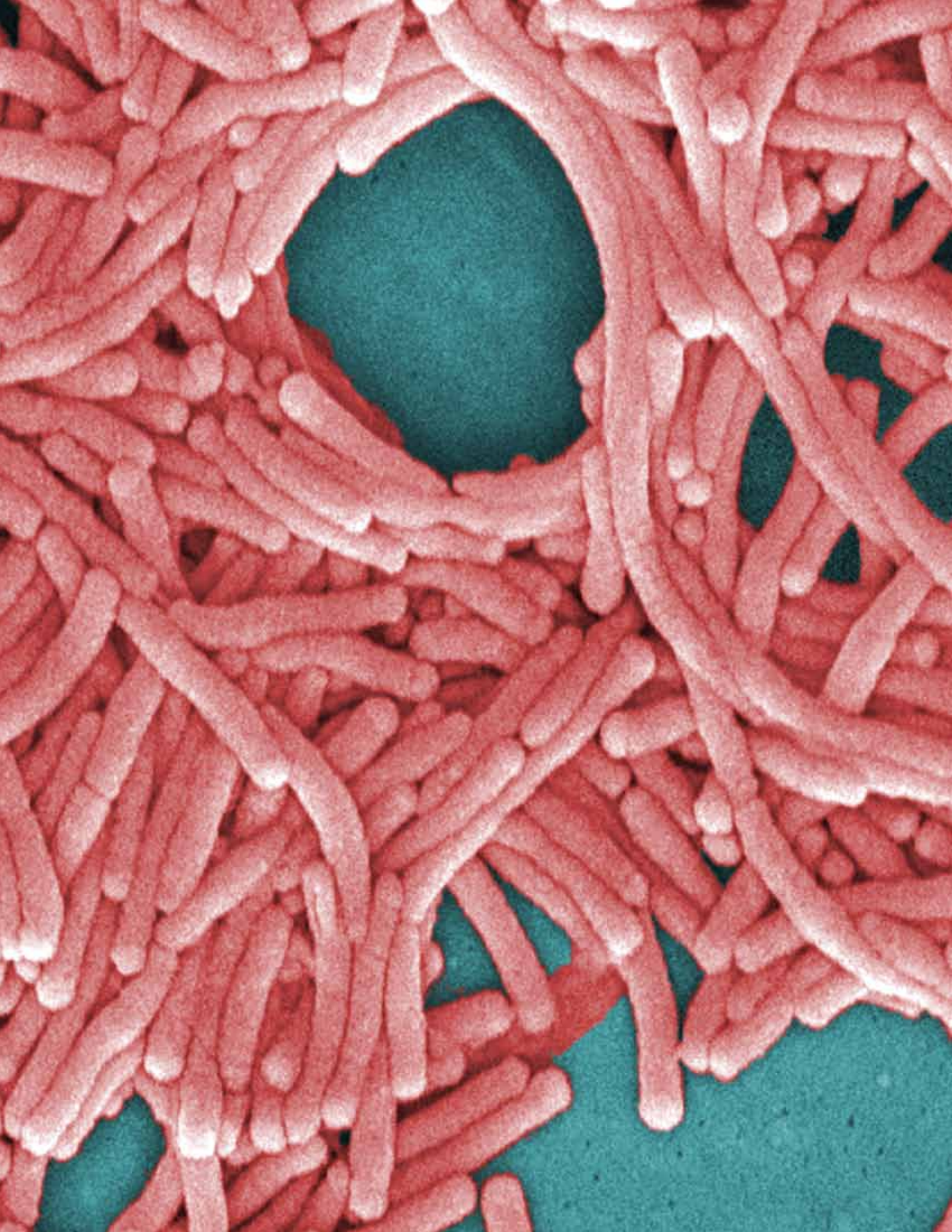
After the outbreak, Singapore's Ministry of Health, together with the WHO, created a pandemic response system to be deployed whenever new global outbreaks arise. As a generic framework that enables a government to respond immediately to any outbreak, it consists of community actions, measures in healthcare settings, border health controls, use of thermal

scanners, and even the quarantining of travelers.

Since its creation, the framework has been used to respond to new public health emergencies.

"We drew on [the framework] ... during the H1N1 outbreak, the history of our experience with SARS determined the kinds of communication strategies we have used," said Menon.

Singapore's SARS episode reflects the capacity to organize health systems and mobilize people to an extent that has perhaps not been seen elsewhere. Policies that can be deemed excessive by external observers were found to be effective and accepted by people on the ground.



iii. Case Study – Legionnaires' Disease in New York City: The New York City Office of Emergency Preparedness and Response

In July 2015, the New York City Department of Health and Mental Hygiene (DOHMH) detected an unusual cluster of Legionnaires' disease cases. Outbreaks of Legionnaires' disease – caused by the airborne *Legionella* bacteria – are not uncommon in New York City, which has a baseline of 200–300 cases each year. However, this wave of cases was particularly concerning. Dozens of people fell sick very quickly in one neighborhood: the South Bronx.

TASK

New York City faced daunting tasks: to understand the cause of the outbreak, to contain it, and to define new legislation and processes to prevent future outbreaks. A particularly challenging piece of this response was to address political and public communication effectively as public fear mounted.

To understand these issues better, the DOHMH's Office of Emergency Preparedness and Response drew upon a framework outlined in the book *The Politics of Crisis Management: Public Leadership Under Pressure*,³ which highlights five steps in crisis response, from initial assessment to final lessons learned. According to this framework, the first step was "sense-making" – how city leaders were to grasp and interpret rapidly unfolding events.

"We've had outbreaks of Legionnaires' disease here before, but this was the largest," said Marisa Raphael, Deputy Commissioner of the Office of Emergency Preparedness and Response, and a Bellagio

PREVIOUS PAGE AND PAGE 28. A large grouping of *Legionella pneumophila* bacteria (Legionnaires' disease) (Janice Haney Carr/ Centers for Disease Control and Prevention via AP).

3 Arjen Boin, Paul 't Hart, Eric Stern, and Bengt Sundelius (2006), *The Politics of Crisis Management: Public Leadership Under Pressure* (Cambridge University Press).



participant. "One of the most concerning things was that many people didn't really have an awareness of Legionnaires' disease; it wasn't something that was typically in the news. And this outbreak wasn't associated with a particular facility. The public fear was: 'I could just be walking around, and I could get it. What should I do?'"

ACTIONS

Once City leaders developed a clear understanding of the emergency, they could turn to the next steps: "decision-making" (determining the right actions) and "meaning-making" (telling a story the public could understand).

"It's very important that politicians understand the medical and scientific context of the situation, because that has a trickle-down effect on the subsequent decisions made," Raphael said. "There's also a small window in which to inform politicians. If you're inconsistent or slow, that can have a detrimental effect on the response."

The team used an innovative surveillance tool to pinpoint the source of the outbreak, based on a suspicion that the bacteria

ABOVE AND PAGE 28. Lincoln Hospital, where cases of Legionnaires' disease were treated, in the Bronx borough of New York (AP Photo/Seth Wenig © [2015] The Associated Press).

THE FIVE PILLARS OF EMERGENCY RESPONSE

From the book *The Politics of Crisis Management: Public Leadership Under Pressure*

- **Sense-making:** *The process by which leaders give meaning to unfolding events during a crisis. At this time, leaders need to determine which signals to follow, the science needs to be translated, and political leaders need to see the whole picture and potential outcomes.*
- **Decision-making:** *Emergencies require leaders to make rapid decisions on issues outside of normal activities. During this phase, leaders depend on coordination from agencies in order to make informed decisions.*
- **Meaning-making:** *At this point, the goal is to reduce anxiety and quell fears, shaping public understanding of the crisis and building trust.*
- **End games:** *Determining the point at which a crisis is officially over. This is based on many factors including the perceived political success of the emergency.*
- **Lessons learned:** *Finally, it's important to provide political leaders with an immediate briefing and recommended courses of action. Coordination between agencies should be improved, and lessons built upon ahead of the next emergency.*

were in cooling towers. The source tower was checked and cleaned, and New York City began a massive campaign to map and clean all cooling towers within the city.

The “meaning-making” step was also a tremendous challenge. Legionnaires’ disease has a two-week incubation period, so new cases kept emerging as these interventions were underway.

“While we were saying we were adapting interventions to contain the spread, there were still additional cases popping up that had been incubating,” Raphael said. “That was confusing to people, because normally you do the intervention and the cases immediately go down.”

Another messaging challenge was that when the outbreak began, NYC had no single repository of all cooling towers, which drew criticism from some. (There had never been a

requirement or regulation requiring this, either in NYC or anywhere else in the country.) Additionally, no jurisdiction was responsible for cleaning all cooling towers, a fact that spurred new legislation.

Explaining the science around cleaning cooling towers was no less complex.

“People have equated it to washing hands,” Raphael said. “You can wash your hands and they will be clean for that moment, but then you’ll be exposed to other germs. In the same way, you can declare a cooling tower clean, but you can go back in a few days and see a different result. We were dealing with a moving target.”

CASE STUDIES



LESSONS LEARNED

In terms of the communication and political components, Raphael said there were many lessons learned.

"We're scientists by nature, and we see our role as conveying technical information to both the public and policymakers, and making recommendations based on science," she said. "But what often ends up happening is a combination of the science, the politics, and the public perception."

Unlike Ebola – which the Health Department was able to begin preparing for months in advance of a case – the Legionnaires' outbreak was sudden. Because of this, Raphael said, the agency's messaging was more successful during Ebola than during the Legionnaires' outbreak.

"With Ebola, we sent teams out into New York City's West African communities, we created palm cards that said 'Am I at risk?' in many different languages and we got a lot of positive feedback. I think the general feeling was that the messaging

CASE STUDIES

Defining an end
to an outbreak
is also helpful
psychologically,
Raphael said,
because after an
intense time of fear,
people want to see
an end point.

was more effective at calming people during Ebola than during Legionnaires’.”

Defining an “end game” for the response is also a core part of messaging. Unlike during Ebola, the end of the Legionnaires’ outbreak was hard to define. Raphael said there was a mistaken public assumption that the city would reach a baseline of zero, as seen with Ebola. The public sought this baseline despite the fact that Legionnaires’ disease is endemic in New York City.

“For Ebola, we knew when the risk was over,” Raphael said. “For Legionnaires’, our Incident Command System [the management system used during emergency responses] remained mobilized for a long time after the threat was gone. Something that was helpful for both Ebola and Legionnaires’ was to convene external panels of experts who could validate the response and affirm when it was over.”

Defining an end to an outbreak is also helpful psychologically, Raphael said, because after an intense time of fear, people want to see an end point.

The team also noted the importance of improving coordination with agencies. After the outbreak, the risk communication expert Peter Sandman conducted leadership training at the DOHMH.

“One question that emerged was, how do we work as closely as possible with other New York City agencies on risk communication?” Raphael said.

The department expects to roll out similar training for its leaders and communication staff, and is considering bringing in a risk communication expert advisor during times of emergency. There are also plans to elevate its public information officer role to become more prominent in an emergency, putting it on an equal footing with the office’s scientific functions.

“Risk communication is a fine balance,” Raphael said. “You don’t want to over-reassure but you don’t want to minimize how people feel. You want to validate public feeling. It’s really challenging to do it right.”

Expert Insights: Key Areas of Need and Opportunity



The following section distills expert insights from the Bellagio convening, as well as from a series of additional interviews conducted with community leaders and public health professionals. They detail the critical needs and opportunities around improving public health communication, outlining key challenges and addressing the ways in which they can begin to be tackled.

i. Barriers to Building Trust in Public Health Communications

Trust and credibility are vital components of effective communication during a public health emergency. The Bellagio group identified a set of issues that create barriers to trust, particularly in a time of crisis. In a hyper-connected society, where mainstream media and social media serve to accelerate the flow of information, the stakes are especially high.



ABOVE. A panoramic view of a humanitarian base camp where the International Organization of Migration (IOM) set up its operations in Chautara, Sindhupalchok, Nepal, after the earthquake (© IOM 2015 via Flickr).

"Public health crises are uniquely likely to spark rumors and disinformation," said Dr. Gavin Macgregor-Skinner, Director of Global Disaster Response at Beth Israel Deaconess Medical Center, who led medical response teams during the Ebola outbreak.

The spread of rumors can both reflect and accelerate a breakdown of trust, and should be treated as a warning light for a broken information chain. Ahead of the Bellagio convening, News Deeply interviewed Open Mic Nepal, which worked in conjunction with Internews to identify and address rumors in the wake of the Nepal earthquake. The organization cited the example of a rumor that spread in one community, to the effect that a humanitarian operations base was nothing more than an expensive hotel; the rumors were fueled by the fact that people saw foreign staff eating and drinking in expensive restaurants. The trust between responders and local citizens was damaged, and citizens placed limited confidence in interventions as a result. The incident showed the negative power of rumors, yet it also highlighted the ongoing concerns of nearby communities. By tracking rumors such as this one, responders can observe trends in information flows and gather community feedback or identify any public concerns with response efforts.

"What we need most in an emergency, which is trusted information, is something we won't have. In times of panic people believe and look for the worst ... [information] moves ahead of the pathogen. It changes the nature of the game," said Jay Walker, the Chairman and Curator of TEDMED.



"It can do harm, or it can do more good more quickly than ever before. Fear and panic, in particular, move at the speed of light ... if communications are ahead of the pathogen, what is the consequence?"

The answer, he says, is that authorities and public health responders will lose their ability to shape the narrative or influence public opinion around a crisis. Sources of misinformation can run rampant, resulting in a cacophonous and chaotic information landscape. This represents a dangerous vulnerability within the global health system: a point of weakness that can lead to impaired public health interventions and a lack of resilient capacity to respond in critical moments.

"How do we create a trusted neutral party that is constantly adapting and able to communicate? We will need to either borrow or build trust; it will need to be borrowed and stockpiled," he added.

When trust cannot be quickly built, it can, however, be borrowed. David Kyne outlined the case study of *Africa United*, a communication platform that worked with famous soccer stars to craft messaging around the Ebola response.

ABOVE. A woman from Singla village, Nepal, extracts her belongings from the rubble, after the earthquake (Photo by Asian Development Bank via Flickr).

SIX BARRIERS TO BUILDING TRUST

- **Fear:** *Pervasive public anxiety that can magnify the perception of risk and complicate the emergency response.*
- **Misinformation:** *A distortion of facts that can result from rumors, inaccurate media reports, deliberate distortion or profiteering, and a lack of transparency from officials.*
- **Lack of credibility:** *A deficit of trust among key stakeholders and target audiences, often stemming from a lack of prior relationship-building. This can also come from a general distrust of authorities, who are perceived as issuing illegitimate orders, setting double standards, or giving certain groups preferential treatment.*
- **Bureaucratic inertia:** *A lack of proactive communication, as a result of a poorly structured organizational culture. In times of crisis, when there is a sense of urgency and pressure around public messaging, these organizations are unable to move with the necessary speed and agility.*
- **Perceived lack of accountability:** *Communities need open channels and ongoing opportunities to engage with responders in order to prevent a perceived lack of accountability.*
- **Lack of coordination:** *A lack of collaboration across official organizations, or within groups of public health responders, can lead to duplication, resulting in mistrust.*

"We were doing communication through the captain of the soccer team in Sierra Leone, borrowing his time, as someone with the standing and credibility to tell people that health workers are not the enemy, they are doing something good," Kyne said. "We're now working to use this platform to deploy basic health information, building up the capacity so it's ready to go anytime."

Jay Walker noted the power of religious leaders in sharing messages with trusted and established audiences. In Sierra Leone and Guinea, local imams were brought into the conversation around Ebola communication too late. But as Walker says, "they were the only ones with the credibility to tell people to change their burial practices." Similarly, Dr. Larry Brilliant drew upon his experience tackling polio in India. "With polio, we borrowed the trust of Bollywood, especially the women of Bollywood, to spread the message that vaccines are a good thing, and dispelling rumors."

"In this interconnected era, we need not only to speak in a partner's or stakeholder's language – we have to listen and engage as they do," said Nancy Turett, principal of WholeView. "Recent innovations in global communication over the past several years have greatly benefited corporate interests and commercial brands; it's urgent that public health organizations are able to take full advantage of the new techniques."



BUILDING PUBLIC TRUST AT THE COMMUNITY LEVEL

- **Be self-aware.** Give weight to local traditions, norms, and communication codes. Effective communication requires an understanding of the values, practices, and priorities within a given community. Research into local practices like community meetings, and local realities such as literacy rates – especially when handing over contracts or written materials – can be crucial to an effective response.
- **See community leaders as experts.** Public health leaders need to understand and engage with the trusted leadership in a given cultural context.
- **Harmonize words and actions.** Many communities have felt disappointed or let down in the past by external interventions that promised results but did not deliver, or that disappeared partway through the effort. Emergency responders should promise only what they are confident they can deliver.

ABOVE. A sign points to the emergency room entrance at Texas Health Presbyterian Hospital, where us Ebola patient Thomas Eric Duncan was treated, in Dallas, Texas (AP Photo/LM Otero © [2014] The Associated Press).

Ann Davison, Chair of the us Public Affairs and Crisis Practice at Burson-Marsteller, worked directly with Texas Health Presbyterian Hospital, the facility that received the first Ebola patient in the us. While the hospital handled the case of Thomas Eric Duncan, the Ebola victim who eventually succumbed to the disease in October 2014, officials needed swiftly to address public concerns about the outbreak and the risk to other patients at their facility. Davison found that within the public health community, “nurses were some of the most believable and convincing messengers on whether people should feel comfortable, feel safe, feel ready to come back to the hospital.”

Yvonne MacPherson, the Director of BBC Media Action in the us, sees a need for dedicated research into networks of trust and how they facilitate the flow of critical information. This approach would enable public health actors to better engage and harness existing relationships of trust during an emergency.

“Where are those people most impactful to key decision-making? We need a theory of change around that,” MacPherson said. “Celebrities might be better at triggering [information] they hadn’t heard before – but families are more influential in [shaping] day-to-day personal behavior. We need to be more capable of understanding cognitive decision-making so that we can formulate strategies around that.”

Fatimatou, a Tuareg woman from a village near Timbuktu, Mali, with her few possessions at a refugee camp in Burkina Faso in 2013 (Photo by Kate Thomas/News Deeply).





ii. Collecting and Scaling Best Practices

Over the course of recent public health emergencies, a series of innovative communication tactics have been tried and proven effective. In some cases, these practices have been documented; the New York Office of Emergency Preparedness, for example, has developed a pandemic flu handbook, detailing its best practices and guiding

public health officials in future outbreaks. The US Centers for Disease Control and Prevention publishes basic materials, including a manual, through an online hub for Crisis and Emergency Risk Management. Yet there has not been a clear and comprehensive system for cataloging effective methodologies, within or across public health agencies; as a result, there have repeatedly been missed opportunities to harness and implement best practices at scale.

ABOVE. Members of the US Department of Defense's Ebola Military Medical Support Team use checklists during training at San Antonio Military Medical Center (AP Photo/Eric Gay © [2014] The Associated Press).



Some of these practices involve low-tech communication systems that are extremely effective and easy to implement, across multiple country contexts. Low-tech interventions are critical to any public health response, but particularly in low and middle-income countries, noted Yvonne MacPherson of BBC Media Action. Basic cellphones are able to reach across populations; text messaging is a fast, cheap, and accessible way to spread vital public health messages. Platforms such as Rapidsms and Frontlinesms were deployed during the Ebola outbreak, spreading public health messages across local communities. Amid the H5N1 outbreak in Indonesia, 35,000

basic mobile phones were used by communities to determine how much bleach and disinfectant to use in fighting the spread of disease. During the Gaza war of 2008, the Red Cross/Red Crescent created a text message blood donor alert that resulted in donations from 25 percent of recipients, within two hours of the emission.

In another basic best practice, megaphones have been used to broadcast messages at the local level; they can be used immediately during a crisis, with minimal cost or training. Megaphones were deployed to great effect during the 2004 Bangladeshi floods, the 2013 refugee crisis in Mali and Burkina Faso, and the West African Ebola outbreak of 2013–15. Yet even some of these easy-to-use methodologies have not been collected and shared systematically between global public health practitioners and humanitarian emergency responders. As a result, lifesaving information has failed to spread as effectively as it could in times of urgent need. Greater exchange between the public health realm and the humanitarian emergency response community should be a priority. Had the Ebola crisis been identified as a humanitarian emergency, resulting coordination structures would have been triggered.

ABOVE. A man uses a megaphone as UNICEF and partners take to the streets in Conakry, Guinea, to share Ebola messages (Photo by UNICEF Guinea via Flickr).



iii. Managing Social Media for Mass Public Engagement

There is no shortage of public demand for information during a crisis. Social media and connective technologies have created both an opportunity and a challenge for public health actors, reaching and responding to the public around the clock.

Dr. Gavin Macgregor-Skinner cited the social media overload during the Haiti earthquake, noting that his team was “completely overwhelmed” by Twitter messages.

“We harnessed volunteers to go through that volume [of social media messages]. It created a virtual communication support network,” he said. In contrast to his limited bandwidth in the field, an extended team in the us could be deployed to field and filter messages.

ABOVE. A team of WHO contact tracers visits a community in Conakry, Guinea, after a family member was infected with Ebola (Photo by UNMEER/Martine Perret via Flickr).

“What kind of a communication system will we need to have in a world that could survive 20 billion disingenuous or misleading or gamed messages per day?”

Marisa Raphael at the New York City Department of Health and Mental Hygiene describes a similar approach to coping with the flood of social media messages in times of peak public interest.

“We stand up a team of social media monitors who identify key concerns and work them into official talking points ... the social media monitors are all trained for emergency response roles,” she said.

Andrea Würz, Communications Officer at the European Centre for Disease Prevention and Control (ECDC), noted that traffic to the ECDC’s website grew during the Ebola outbreak, with an 80 percent increase associated with Ebola-related content. The ECDC responded by sharing facts about Ebola via social media. Tweets included scientific information about how the disease is transmitted, and links to technical documents available on the website. Würz said that technological advances in recent years enabled the ECDC to respond more intuitively to public concerns about Ebola than during the H1N1 pandemic in 2009.

“The use of ECDC’s social media accounts for sharing information has grown in recent years, including capacity for monitoring social media conversations in these platforms,” Würz said. “Much of the information and data is now presented in a more interactive and visual way, which eases sharing and further dissemination. The use of the website as a central hub for sharing information has also expanded.”

As a whole, however, public health officials have not designed systems that can effectively respond to rapidly growing digital information flows. While those systems wait to be created, the volume of messages and number of connected users is steadily increasing, said Dr. Larry Brilliant.

“What kind of a communication system will we need to have in a world that could survive 20 billion disingenuous or misleading or gamed messages per day? What kind of world do we need to have for the systems to exist?” he asked.

When organized effectively, social media campaigns can mobilize a highly effective public response. During the Ebola outbreak, the community campaign platform Global Citizen captured a sense of the power of large-scale citizen mobilization when it held a music concert calling for, among other campaigns, more funding for health-system strengthening in West Africa. A quarter of a



million people attended and, soon after, USAID committed \$126M to improve healthcare in the countries affected by Ebola. Similarly, the advocacy community Avaaz collected messages from potential volunteers ready to travel to West Africa to help, contributing to a narrative that mitigated fear and countered calls for travel bans and quarantines in Europe and the United States.

ABOVE. An unidentified boy pulls a man on a floating tube through stagnant floodwaters in Dhaka, Bangladesh, in September 2004 (AP Photo/Pavel Rahman © [2004] The Associated Press).

iv. Improving the Impact of Mainstream Media Coverage

Media outlets, especially TV and radio, are often the fastest and most direct channels to influence public opinion.

As a public health crisis unfolds, mainstream media can be a constructive source of information or a potentially dangerous force of misinformation. Media outlets, especially televised and radio broadcasts, are often the fastest and most direct channels to influence public opinion. These channels can be used to engage and inform the public with scientifically accurate messages, empowering the public, and reducing fear. During the SARS outbreak in 2003, Singapore's government launched a dedicated SARS television channel that shared information around the clock.

But media can also be exploited for commercial or political gain, or become amplifiers of public panic. In a study entitled "Mass Media and the Contagion of Fear: The Case of Ebola in America,"⁴ each Ebola-related news video broadcast on two mainstream US television channels was found to have inspired tens of thousands of Ebola-related tweets and internet searches over a six-week period in 2014. Some of the searches related to phrases such as, "Ebola symptoms" and "Do I have Ebola?" Yet over time, the study also revealed a "boredom" effect, where after a few weeks of heavy coverage, Ebola-related news stories became less and less able to spur the public to seek information through related internet searches.

While there were many cases of factual and responsible reporting on the Ebola crisis, some broadcasts and media outlets amplified public fears with highly alarmist headlines. One CNN report

4 Sherry Towers et al., "Mass Media and the Contagion of Fear: The Case of Ebola in America," *Public Library of Science (PLOS)*, June 11, 2015, accessed December 21, 2015, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0129179>.



suggested Ebola might be considered “the ISIS of biological agents,” while the UK’s *Daily Mail* asked, “Could Terrorists Turn Themselves Into Ebola Suicide ‘Bombs?’”⁵ Other media reports demonstrated a severe lack of local voices from the ground, including an hour-long segment from Liberia by CBS News’ *60 Minutes* that did not include a single Liberian interview subject.

“The indirect impact of the [media] horror story was evident on the ground,” said Ivo Brandau, head of the Public Information Unit at the West and Central African division of the UN Office for the Coordination of Humanitarian Affairs. “For those who came in as responders it was very apparent in how fearful their staff were, in how hard it was to recruit volunteers. That came directly from how [the outbreak] had been treated in the media.”

ABOVE. Production at *Front Page Africa*, a Liberian national newspaper that covered the Ebola outbreak
(Photo by Ken Harper/si Newhouse School of Public Communications via Flickr).

- 5 Ted Thornhill, “Could Terrorists Turn Themselves Into Ebola Suicide ‘Bombs?’ Experts Fear ISIS Jihadists May Infect Themselves to Spread Virus in the West,” *Daily Mail*, October 9, 2014, accessed December 21, 2015, <http://www.dailymail.co.uk/news/article-2786433/Could-Ebola-used-weapon-isis-Terror-experts-raise-prospect-jihadists-infecting-spreading-virus-Western-countries.html>.

There is a critical need to invest in training and capacity building for journalists, particularly toward enhancing knowledge about science, medicine, data, and public health.

Just as mainstream reporting can amplify fear and hinder the humanitarian response to a crisis, media silence can also be problematic. Public awareness is a critical aspect of generating funding and volunteer resources for crisis response; as coverage of the Ebola crisis dissipated, it became harder to mobilize those resources. As Mark Henderson, Head of Communications at the Wellcome Trust, asked, “How can we keep the pressure up when the mainstream press goes quiet?”

Brandau saw the need for a “one-stop media shop during the crisis” – a resource for journalists who often struggled to find a centralized source of data, while covering an outbreak with many scientific unknowns. Ann Davison of Burson-Marsteller saw her team directly engage mainstream media networks, assigning themselves to keep in close contact with reporters “to dampen down speculation and correct, correct, correct” misperceptions. She noticed an overall lack of understanding around the science of an outbreak, and with it an opportunity to “embed more science within the media, but also getting it taught and better integrated into our education systems.” Similarly, Lara Setrakian, the CEO of News Deeply, presented key learnings from EbolaDeeply.org, an independent news and information platform on the Ebola outbreak. The site served as a resource for mainstream media partners, who drew from its coverage and expert networks to enhance their reporting.

There is a critical need to invest in training and capacity building for journalists, particularly toward enhancing knowledge about science, medicine, data, and public health. Yvonne MacPherson of BBC Media Action points out that local journalists, in particular, can be highly effective partners; they are well placed to tap into context, culture, and trusted networks. In Western newsrooms, training in science journalism is needed for a distinct reason: commercial pressures have led to shrinking newsrooms and cutbacks in specialized science reporting. Roughly 80 percent of newspapers have cut their weekly science sections since 1989, according to the *Columbia Journalism Review*.⁶ Proactive engagement and creative approaches to capacity building can help provide today’s news organizations with the scientific expertise needed to cover disease outbreaks adequately.

6 Sarah Morrison, “Hard Numbers: Weird Science,” *Columbia Journalism Review* January/February 2013, accessed December 21, 2015, http://www.cjr.org/currents/hard_numbers_jf2013.php.

Developing Tools and Technology



A man logs into open-source
software Ushahidi in Kenya
(Photo by Erik Hersman via Flickr).



i. Advanced Technology Platforms

Enhanced technologies and platforms should be factored into the future of public health communication, especially during a time of crisis. The right platforms can be amplifiers of public health communication and public engagement. New tech platforms should be assessed for their suitability and agility in settings hampered by connectivity

constraints. These new platforms rolled out during public health crises should build upon existing systems already in place; organizations should maximize the value of new tech platforms, particularly those that have a growing record of success in various regional contexts.

During the Ebola response in West Africa, mHealth platforms were deployed in the field, allowing messages, updates, and advice to reach front-line health workers and citizens. Platforms such as

Enhanced technologies and platforms should be factored into the future of public health communication, especially during a time of crisis.

mHero – a fusion of the open-source, USAID-funded iHRIS health workforce information system software and the UNICEF-developed and supported RapidPro – enhanced communication between front-line health workers, governments, and organizations, building directly upon technologies and systems already in use. These platforms have not been dissolved; they remain in place, ensuring lasting capability and increased health system resilience during future crises.

Dr. Gavin Macgregor-Skinner highlighted additional platforms that were deployed on the ground in West Africa, including DHIS 2.0, Kobo, Magpi, FrontlinesMS and U-Report. He also spoke about the power of telemedicine via vsee.com, enabling physicians to monitor Ebola patients from thousands of miles away. He outlined his criteria for the communication tech platforms of the future: strong visuals, information-rich, spatial and temporal properties, a user-friendly nature, capability for round-the-clock updates, and portals linked to models, tools, and resources.

Dr. Larry Brilliant said that overall, public health policy has fallen behind advances in technology. Public health officials need to document and constantly update the landscape of available technologies, in order to make use of the appropriate options. Some of the existing tools include HealthMap, Ushahidi, Facebook's safety check, G-PHEN, Instead, Twitter's influenza feed, and bi-directional participatory surveillance feeds such as FluTracker, which was conceived in Australia and has since been rolled out to five other countries.

Participatory risk mapping – using tools such as OpenStreetMaps, Google Earth, Ushahidi, or Tomnod – serves public health responders by “making the invisible visible,” according to Dr. Macgregor-Skinner. Collaborating with communities to map activities, facilities, and, in the case of outbreaks, patient cases, enhances the platform's utility. During the Pakistan floods in 2009, Macgregor-Skinner recounted, more than 36,000 tuberculosis patients went missing; mapping tools were successfully used to find them and deliver care. Such systems may ultimately be incorporated into epidemiological and contact tracing systems; in order to be effective, they will need to partner with governments or other organizations.

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ii. Internet Forums and Websites

In crisis settings, simple internet forums can reach more people than sophisticated technology.

In crisis settings, simple internet forums can reach more people than sophisticated technology: internet forums such as Healthcare Information for All (HIFA), which brings together 15,000 health workers globally, and the infectious diseases forum **PROMED** have been valuable resources for ministries of health and clinical staff

during the Ebola outbreak, and should continue to be as we move forward.

Platforms such as Nigeria Health Watch are also bridging the top-down government–citizen communication gap, translating knowledge to communities and inviting them into the conversation on health policy and communication in Nigeria. The platform's greatest strength is that it is run by both communicators and doctors, further proving the concept that enhanced cross-sectoral collaboration is key to a more effective public health communication response.

Online media landscape guides – such as those advocated by the Communication with Disaster Affected Communities (CDAC) Network – are another critical preparedness tool, providing comprehensive, detailed information on media landscapes in a number of countries. They can be easily accessed in an emergency, and serve as an important starting point for communication responders.

iii. Research and Knowledge Management Systems

Information is a public health practitioner's greatest asset. But at present, information around public health communication is not being harnessed or put to its most effective use. While communication professionals implement innovative measures in the field, there is a lack of effective data collection and knowledge management,

documenting those practices and their effectiveness. Collaborative technologies and centralized communities of practice can be mobilized to address this, by storing information for future synthesis and action. A purpose-built platform that captures data, feedback, and analysis of public health communication strategies could serve as a valuable resource during future public health emergencies, providing off-the-shelf methodologies that can be adapted and applied to any new crisis.

Although research is not seen as a priority during times of emergency, public health crises provide significant opportunity for growing the research and knowledge base on effective communication. There is great potential for conducting more testing in the course of epidemics, measuring the impact of diverse tools and mechanisms, and analyzing ways in which they can be improved. Progress in public health communication depends upon the integration of research into the fabric of the response. However, there are significant challenges to conducting research while under pressure to deliver fast, effective solutions.

As BBC Media Action highlights in its 2015 report entitled "Humanitarian Broadcasting in Emergencies – A Synthesis of Evaluation Findings,"⁷ there are various constraints, including ethical and safety considerations, that can limit the effective testing during a crisis.

7 Theodora Hannides "Humanitarian Broadcasting in Emergencies – A Synthesis of Evaluation Findings," *BBC Media Action*, October 2015, accessed December 21, 2015, <http://www.bbc.co.uk/mediaaction/publications-and-resources/research/reports/Humanitarian-broadcasting-in-emergencies-synthesis-report-2015>.

Information is
a public health
practitioner's
greatest asset.
But at present,
information around
public health
communications
is not being
harnessed or put to
its most effective
use.

"For example, in the case of BBC Media Action's evaluation of their radio response to the Ebola epidemic in 2014–2015, it was impossible to establish direct access to people who were affected by the epidemic without the research process itself exacerbating the risk of spreading the virus (for example, by asking people to gather together for focus groups)," the report documented. "For this reason, a short SMS survey administered by GeoPoll phone survey was used in combination with expert interviews, and focus group discussions were added later when access became possible."

How can we create a better environment for research and evaluation during crises?

- **Testing research techniques in periods of calm, or before a crisis hits.** Mark Henderson of the Wellcome Trust used the example of messaging around antimicrobial resistance, a topic that receives much attention within the science and medical fields, but which hadn't garnered widespread public awareness. By conducting focus groups with pre-existing friendship pairs, researchers were able to adapt their messaging strategy using language that was more compelling for their target audience. But by changing their language from "antimicrobial resistance" to "drug-resistant infections," researchers were able to document a more effective campaign for community engagement. The CDAC Network advocates that all health messages are pre-tested with local communities and translated into local languages.
- **Collaborating or exchanging with organizations that specialize in research.** During the Ebola outbreak, BBC Media Action used pre-testing interviews with experts and community leaders in order to shape their response. To assess audience opinions, GeoPoll SMS surveys were sent out to a selection of the population in Liberia. Several months after the height of the outbreak, listening focus groups were conducted as per safety guidelines.
- **Working with emerging tools and initiatives.** These include the Research for Health in Humanitarian Crises (R2HC) program from the UK Department for International Development (DfID) and the Wellcome Trust, which aims to improve health outcomes by strengthening the evidence base for health interventions in humanitarian crises. R2HC is currently commissioning a review to demonstrate the value of conducting research during an epidemic.



Communications and Public Health Governance

ABOVE. President Barack Obama meets with Liberian President Ellen Johnson Sirleaf in the Oval Office of the White House to discuss the ongoing response to the Ebola outbreak (AP Photo/Evan Vucci © [2003] The Associated Press).

i. Effective Leadership Communication

“Many of our conclaves are looking at yesterday’s problems, not addressing tomorrow’s.”

There has been much discussion around the need for clarity of the WHO’s role in convening an effective worldwide response to major outbreaks. But which organization should take the reins when it comes to mustering a solid public health communication response? At the Bellagio convening, Dr. Larry Brilliant spoke about how questions around structural and organizational issues in the public health communication realm are causing missed opportunities and costing lives. “We have some structural problems that have made us solution-phobic, instead of innovation-philic,” Brilliant

said. “Many of our conclaves are looking at yesterday’s problems, not addressing tomorrow’s. Catastrophic response structures need to be changed.”

International public health organizations have a pivotal role to play in terms of leadership, and yet new structures are needed in order to mount an effective communication response to major public health threats. With overlapping actors and areas of responsibility in emergency response, there is no designated system for communication stewardship once an emergency threatens an entire region or beyond.

“What happened in West Africa during Ebola was a microcosm of what’s happened more broadly across sub-Saharan Africa and South Asia,” said Lesley-Anne Long, global director of mPowering Frontline Health Workers. “That is, an incredibly fragmented landscape, with lots of solutions being delivered by multiple organizations. There’s been very poor coordination, with not much in the way of harmonization or standardized approaches to development.”



ii. The Role of National and Regional Governments

In the midst of a crisis, the role of national and regional governments should be tightly interwoven with collaboration with other organizations, most notably scientific agencies. As we saw during the Ebola outbreak in the us, some state governors imposed quarantine measures, called for flight bans, and enacted other restrictive policies,

going against the recommendations of the CDC. As a recent report from the American Civil Liberties Union and Yale Global Health Justice Partnership documented, such policies threatened to undermine, not protect, public health both in the us and in the countries most affected by the outbreak.

"Many governors decided to take matters into their own hands and craft policies that rejected the scientific evidence of Ebola transmission and responded to public fears directly," the report states. "Governors from across the political spectrum responded to the hysteria with policies far more restrictive than the CDC's guidelines. Governor Malloy of Connecticut announced the most restrictive policy in the nation, directly contrasting his actions to the CDC's guidelines. 'I believe we must go above and beyond what the CDC is recommending,' he declared."

There is also a need to ensure that effective frameworks are ready in the early stages of a crisis. Andrea Würz, Communications Officer at the ECDC, noted a need to ensure that effective regional leadership frameworks are ready in the early stages of a public

ABOVE. A girl receives a polio vaccine in India
(Photo by CDC Global via Flickr).

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health crisis. Würz saw her team respond efficiently to a surge in public and media requests for Ebola-related information thanks to a public health emergency (PHE) plan. Under the plan, the ECDC had already made organizational adjustments – including reallocating staff, mobilizing resources, and implementing prompt clearance processes – by the time a Spanish nurse became ill with Ebola, prompting a surge in European media requests.

“As part of the PHE plan, there was already an enhanced communication support in place and staff were working in shifts in order to respond to an increased workload,” Würz said. However, she noted that “more work is needed to reinforce the coordination structures for rapidly sharing messages across organizations.”

National and regional governments are most effective at crisis communication when there is a healthy collaborative landscape with other stakeholders, including internal and external organizations and the wider community. There is a need to hone communication channels, ensuring that scientific evidence and advice is effectively translated for politicians and the public.

In times of calm, it is critical that national and regional governments work to grasp the issues that citizens might face during future crises. This enables them to predict lines of questioning and respond quickly when a crisis does hit. Communicating in a crisis requires a different skillset from that during periods of calm. Dr. Barbara Reynolds of the US Centers for Disease Control and Prevention explained that leaders should also expect to field five distinct models of questions:

- *Are my family and I safe?*
- *What have you found that may affect me?*
- *What can I do to protect myself and my family?*
- *Who caused this?*
- *Can you fix it?*

“In a serious crisis, the way we take in, process, and act on information changes,” Reynolds said. Crisis leadership traits for national and regional governments include a high tolerance for stress, a low need for affiliation, confident decision-making, the ability to engage in critical thinking under stress, caution, and a combination of gentleness and great strength.

iii. Inclusive Communication at the Community Level

Ebola survivors and community responders told us how a lack of clear, harmonized communication made the outbreak a more frightening experience than it should have been. "One of the most confusing things for the community was the sheer number of actors on the scene," said Abu Kamara, an Ebola active case finder and contact tracer in

Liberia's densely populated West Point slum. "They all had different messages to share and there was a real need for more succinct, cohesive messaging. Eventually, [Liberia's] Ministry of Health convened joint workshops. Placards came out, serving as a central source of information."

"Any responder is a communicator," said Ivo Brandau of OCHA. "They need to convey a message that yes, you can trust us, and they need to remember the importance of the dignity of local communities."

In a pre-conference interview, Timothy La Rose, UNICEF's communication specialist in Guinea, spoke about how the arc of new Ebola cases began to fall once external organizations involved local communities. "The overall drop in cases has come from community action and constant vigilance and is the result of successful communication for development (C4D)," La Rose said. "We used traditional methods of communication – sharing information face-to-face, convincing people to go to the hospital – and this has helped the most. Another thing that has helped is working with our UNICEF colleagues who have previously worked in rural communities; UNICEF has been here in Guinea for about 30 years. The people know our staff. So when the white vehicles have to come, it helps if communities know the people who get out."



A woman celebrates with others as the country is declared Ebola free in Freetown, Sierra Leone on November 7, 2015 (AP Photo/Aurelie Marrier d'Unienville).

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Shaping Effective Community Engagement

Community-level interventions do not need to be complex or technologically sophisticated in order to be effective. As Dr. Gavin Macgregor-Skinner noted, building resilience on the ground can be as simple as partnering with communities to empower them to take action; in the Ebola crisis, this was as simple as encouraging citizens to use bleach and



garbage bags to protect themselves, while isolating suspected cases in their immediate environment. In what became an iconic example, Liberian nursing student Fatu Kerkula, whose story was well documented by mainstream media outlets, used plastic bags as makeshift personal protective equipment (PPE), shielding herself from contracting Ebola while treating her own family members for the disease. Word-of-mouth and radio reports highlighting such local innovations inspired other citizens across West Africa to emulate Kerkula's constructive actions.

ABOVE. Fatu Kerkula, a Liberian nursing student, with one of her family members. Kerkula created homemade protective equipment from plastic bags during the Ebola outbreak, to nurse her family (Photo by Samwar Fallah/Ebola Deeply).

The following emerging best practices and methodologies for community engagement were highlighted at the Bellagio event:

i. Conscious Community Engagement

From the very beginning of West Africa's Ebola outbreak, many civil society groups, community leaders, and religious leaders reported feeling excluded from conversations around effective messaging in their own countries. Myths and rumors spread rapidly, in part because key cornerstones of local communities were left out of pivotal discussions; citizens had few trusted sources to turn to, traditional wisdom was overlooked, and false narratives ballooned.

Community inclusion should be a pillar of any public health communication intervention. As Sheikh Abu Bakarr Conteh, the head of Sierra Leone's

Inter-Religious Council, said: "For any national messaging program to have effective momentum, the involvement of diverse religious people is crucial." Conteh said it took months for the government and some external organizations to integrate religious leaders into discussions about communication, despite them serving as valued, trusted channels for reaching communities.

Organizations that engaged in constructive collaboration with communities saw rapid results. "In Nigeria, upon arrival, our Ebola treatment facility was attacked and spray-painted," said Macgregor-Skinner. "We put two community members on our facility's executive board, and didn't face any more attacks." He added that the team addressed myths and rumors in real time via social media and created an interactive website, a toll-free help number, and virtual operations support teams managed by students from 12 universities.

ABOVE. Sierra Leone is looking forward to a return to happier times and tourism. Here, boys build sandcastles on the beach at River No. 2, outside Freetown, Sierra Leone in November 2012 (AP Photo/Rebecca Blackwell).



ii. Communicating with Communities (CwC)

According to the **CDAC Network, Communicating with Communities (CwC)** is concerned with the provision of information and the means to communicate as a form of humanitarian assistance. In the context of a public health crisis, it refers to activities where an exchange of information is used to save lives, mitigate

risk, enable greater accountability, shape the response, and support the communication needs of people. It is increasingly being identified as a core deliverable in any humanitarian response, and was first recognized in the wake of the Rwanda genocide, and later seen as a legitimate part of the response to the 2010 Haiti earthquake. During the Haiti cholera outbreak, a **CDAC Network** ground initiative known as **CDAC Haiti** was chosen by **OCHA** to serve as a communication sub-cluster, providing strategic cross-agency leadership and fulfilling other critical roles.

Organizations including Internews, BBC Media Action, and OCHA are members of the **CDAC Network**, which is at the forefront of efforts to mainstream the CwC framework. As **CDAC Network** director Rachel Houghton said, "CwC is about building accountability and resilience. We think people have a right to information, and that's tied to the right to life in a disaster context. It requires a mindset shift among aid agencies."

ABOVE AND PAGE 59. People in the sprawling slum of Cité Soleil queue for food distributed by the United Nations Stabilization Mission in Haiti (MINUSTAH)'s Brazilian battalion and provided by the UN World Food Programme, after the Haiti earthquake (UN Photo/Sophia Paris via Flickr).



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Building on the concept of conscious communicating with communities, CwC involves sharing nuanced, contextualized, information in real time, facilitating deliberate information flow through surveys, radio, community drama, print media, art, two-way feedback loops, and face-to-face interaction. CwC puts communities in leading roles during crises, rather than framing them as followers, and

allows communities and aid organizations to build on pre-existing capacities and learn from one another's expertise and experience. During the Ebola outbreak and Nepal earthquake, after the 2010 floods in Pakistan, and, of course, in Haiti, a conscious effort was made to integrate CwC into the responses. Those emergencies, as well as recent crises in the Central African Republic, Iraq, and Syria, have underscored more than ever the need for meaningful, formal, and collective engagement with communities.

Moving forward, there is a need for a common service approach. Individual organizations and clusters have created diverse initiatives to enhance community engagement, but there remains a lack of overall coordination, preparedness, and pre-positioned tools. A common service approach would have the dual purpose of collectively providing information to affected people, and collecting, aggregating, and analyzing feedback from communities to influence decision-making processes at strategic and operational levels.



iii. Enhanced Partnerships with Local Media

There should be a shift in relationships during an emergency response, toward partnering with local media as legitimate actors. According to Rachel Houghton, local media have five important roles to play during public health emergencies: providing life-saving and risk-mitigating information; giving people a platform to discuss and

ask questions about that information; gathering information and tracking rumors; helping communities connect with each other and collaborate; and acting as a platform for accountability. Integrating local media communication activities into organizations' programs is key, as is improved monitoring and evaluation to demonstrate value.

ABOVE. A child stands among the remains of buildings destroyed by the 2010 floods in Sindh province, Pakistan (Image: DFID/Russell Watkins via Flickr).

"The role of local media and international media in an emergency is radically different," Houghton said, adding that involving local

“The role of local media and international media in an emergency is radically different,” Houghton said, adding that involving local media is one of the most effective ways of meeting the detailed information needs of local audiences.

media is one of the most effective ways of meeting the detailed information needs of local audiences. In order to leverage and support local media, good practice should therefore draw upon a five-pronged approach:

Assessment: Local media should be more effectively used as an early information identification tool. Media landscape mapping and communication need assessments should be conducted before a crisis hits, Houghton said, or done in the earliest possible stages of one. Preparing and pre-positioning communication materials, products, and tools in this way reduces pressure in the first few weeks of a crisis. It also gives international organizations a solid grasp of the profile of local media outlets, allowing strengths, gaps, and potential partnerships to be documented, and networks to be leveraged. From this moment on, it is critical to ensure that media development agencies and their local media partners are recognized as part of the public health and humanitarian response landscape.

Partner and coordinate: Local media outlets should be viewed as potential partner organizations that can bridge key gaps in contextual and cultural understanding. Partnering with local media outlets fosters inclusion, establishing dialogue and feedback loops, thus preventing the spread of rumors and cementing local journalists as vital links in information chains. Through effective coordination, rumors can be tracked and shifting perceptions better understood by external organizations. However, agencies must ensure that they do not instrumentalize local media outlets; local media should be viewed as the experts they are, and should have ongoing access to meetings and information.

Build capacity and technical infrastructure: Agencies should prioritize local broadcasting support and local infrastructure. External organizations should support sector-wide capacity initiatives and aid-promising initiatives to scale up, helping recognized local media outlets communicate and connect to their fullest potential. Technical infrastructure and support can strengthen existing local communication networks, leverage information gathering, and provide platforms for local journalists to gain more exposure. During humanitarian crises, international organizations focus all too often on broadcasting top-down content, when what local radio outlets most need is to repair their capacity in order to distribute local content to trusted audiences already in place.



Use tools and the right language: Stockpiling in-country radios and phone chargers – ready for distribution – should be priorities, to ensure access. But there should also be more funding and resources allocated to community connectivity projects. Collaboration with the private sector is one way to improve mobile connectivity, and ideally those relationships should be in place before crises hit. Language is a powerful tool during crises, and can alienate local media if it's not used according to local contexts. For those who need to communicate immediately, the CDAC Network recommends accumulating hardware and creating a library of pre-positioned messages in different languages. It also recommends developing online media landscape guides for all at-risk countries; these can be easily accessed during a crisis and can speed up the response.

Increase funding for media development initiatives: Local media development agencies and local media both need an increase in funding, as well as support to take promising initiatives to scale. Coordination and collaboration among different media development responders is important, yet it is hampered by competition for funding.

ABOVE. General Community Health Volunteers (GCHVs) walking through West Point, Liberia, during the Ebola outbreak (Photo by Morgana Wingard/ UNDP via Flickr).



A boy drinks from a spout that brings in water from a refillable water tank, inside his home in Rio de Janeiro, Brazil. The metropolitan area's population mushroomed from around 9 million in 1980 to 12 million today, with many of the new residents settling off the grid of basic public services, in the city's more than 1,000 slums (AP Photo/Silvia Izquierdo © [2015] The Associated Press).



A photograph of Dr. Anthony Fauci, an older man with grey hair and glasses, wearing a white lab coat, hugging a younger woman, Nina Pham, from behind. She is wearing a black jacket over a teal top and is smiling broadly. The background is a blurred outdoor setting with trees and a brick wall.

Conclusion and Recommendations

Nina Pham is hugged by Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, outside the National Institutes of Health (NIH) in Bethesda, Md. Pham was the first nurse diagnosed with Ebola after treating an infected man at a Dallas hospital (AP Photo/Pablo Martinez Monsivais © [2014] The Associated Press).

CONCLUSION AND RECOMMENDATIONS

Moving forward, communication must be treated as a vital form of aid, and donors, governments, and organizations should recognize it as such.

Moving forward, communication must be treated as a vital form of aid, and donors, governments, and organizations should recognize it as such. During major crises in recent years – outbreaks of SARS, H1N1, and Ebola, as well as natural disasters in Southeast Asia, New Orleans, Haiti, Bangladesh, Pakistan, Nepal, and many more – the failure of the international community to adopt communication as aid into its humanitarian framework has resulted in significant response gaps. Responding effectively to crises demands a more sophisticated approach, involving the integration of best practices, more focused research, lessons from the private sector across the fields of public relations and marketing, and strategic communication. There is a need to have such channels and mechanisms in place before a crisis hits. New technologies should also be embraced, but not to the detriment of trusted methods of communication, including word-of-mouth.



Preventing initial crises from becoming widespread emergencies hinges upon collaboration and sharing among disparate responders, particularly as connective technologies and social media networks spread information faster than traditional actors can respond. To succeed in sharing messages with the public, those actors must remain a trusted and credible source of information. This means investing in preparedness and building strong relationships with community leaders and organizations. There is a need to extend public health communication beyond didactic messaging, developing tools tailored to specific contexts and community values. At the heart of this analysis is robust evidence of the importance of two-way communication: Messages that do not effectively reach the public have been shown to impair emergency response, often at the cost of human lives.

The following recommendations comprise a roadmap for a more resilient and effective public health communication framework.

ABOVE. UNICEF and partners took to the streets of Conakry to combat the Ebola outbreak with information on how to keep families safe; to prevent the spread, they distributed soap and chlorine (Photo by UNICEF Guinea via Flickr).

CONCLUSION AND RECOMMENDATIONS

At the heart of this analysis is robust evidence of the importance of two-way communication: Messages that do not effectively reach the public have been shown to impair emergency response, often at the cost of human lives.

KEY RECOMMENDATIONS

- **Redefine communication** as a critical form of aid and an essential part of resilience, based on preparedness as well as response. As part of this mindset shift, invest in research and evaluation of best practices in public health communication.
- **Build the architecture** of a new communication system, constructed on a currency of trust and inclusion, accounting for rapid change and a high volume of digital and analog content flow.
- **Create a global health communication advisory board**, representing, and accountable to, the world's largest organizations, and with designated channels for enhanced collaboration, communication, and sharing among responders.
- **Invest in community partners** and treat community organizations, leaders, and local media as long-term assets. Ensure that community leaders are included in response coordination from day one. Support humanitarian agencies to work in concert with media development organizations and local media.
- **Build trust** with local communities through networks and affiliations, forged in times of relative calm and in accordance with the principles of resilience. Enlist the help of trusted and respected figures to help communicate vital public health messages.
- **Increase transparency** and create designated channels for translating scientific and expert knowledge for policymakers. Involve expert crisis communicators in developing such frameworks.
- **Embrace strategic communication**, integrating best practices from the private sector, drawing from the fields of marketing, public relations, and strategic communication to shape more effective public outreach efforts.
- **Map the architecture** of some of the most innovative tech platforms and mobile technology, while also utilizing simple, low-tech solutions that have been proven to impact at scale on the ground.

