Communication Breakdown:  
*An After Action Review of Recent Crises*
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In a crisis, communication is paramount. From coordination of response activities, to informing and updating those who may be impacted, communication can have a critical impact on the actions surrounding an event. Both public agencies, including state and local governments, and private entities, like corporations, healthcare facilities, and academic institutions, rely on two-way communication to inquire about the health and safety of employees, students, patients, and other contacts, and to prioritize resources where help is needed most. Clear, timely notifications can also provide guidance to those impacted by giving instructions from evacuation to shelter in place to help mitigate damage and reduce injuries and fatalities. In many cases, two-way communication is also used to request information from people at the scene, helping guide strategic decision-making and response.

However, communication breakdowns can prevent first responders like firefighters and police from providing fast, dependable assistance. When communication is compromised, emergency services personnel may not be able to perform as quickly and effectively as intended, which can cause dangerous situations to escalate. And lack of communication to those impacted can cause confusion and panic, hindering response efforts.

Due to the increasing occurrence of emergencies of natural and manmade disasters, crisis communication is more important than ever.

For example, recent data indicates that over the past three decades, weather-related incidents resulted in 30,000 fatalities and more than $1 trillion in damage in North America alone. Global reinsurer Swiss Re estimated incremental economic losses from natural catastrophes and manmade disasters hit $140 billion worldwide last year. If emergency responders lack the necessary resources to manage hazardous situations, the number of fatalities and injuries in crises, along with disaster-related losses, will continue to increase.

Looking back at some of the most recent crisis events, we can determine both best practices and areas of weakness that can help us improve disaster response and enhance our ability to save lives and property during emergencies.

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Review of Recent Events: The Role of Critical Communication

To understand the impact of critical communication on emergency response, we will examine best practices and lessons learned from recent impactful events. Based on post-event coverage and after action reporting, we can gain crucial insight on how to leverage critical communication in disaster response in the future. For the purposes of this paper, we will focus on five key events from 2012 and early 2013.

Superstorm Sandy
In October 2012, a hurricane with the nickname “Superstorm Sandy” battered eastern Canada, the Greater Antilles islands, the eastern United States, Bermuda, and the Bahamas. Racking up over $65 billion in losses, Superstorm Sandy was the second-costliest hurricane in United States history. By the time it dissipated, it had caused 285 fatalities, and left 8,100,000 without power.

Aurora, Colorado mass shooting
On July 20, 2012, a gunman dressed in tactical clothing entered the Century 16 Aurora multiplex cinema in Colorado. Interrupting a midnight action movie screening, he set off tear gas grenades and shot into the audience with multiple firearms, killing 12 people and wounding 58 others. Aurora Police were at the scene less than two minutes after the incident was first reported, and the suspect was apprehended in under ten minutes.

London Summer Olympics
The 2012 Summer Olympics represented the largest peacetime security operation in Britain’s history. Held in London from July 27 through August 15, event staff included 12,500 police officers, 12,200 soldiers, 5,500 off-site troops, and 7,000 contracted civilian security workers. It cost $877 million to run security over the 500 acre Olympic Zone.

Waldo Canyon wildfire
It took over two weeks to fully contain the Waldo Canyon wildfire in Colorado Springs, Colorado, which started in June 2012. The fire destroyed 345 homes, caused $352.6 million in damages, and led to the evacuation of 26,000 residents on a single day. Affecting a 28.5 square mile range, it closed U.S. Highway 24 in both directions. It was one of the most destructive Colorado wildfire on record.
Boston Marathon bombings
On April 15, 2013, at 2:49 in the afternoon, two explosions rocked the finish line of the Boston Marathon. New England’s most widely viewed sporting event, and the world’s oldest annual marathon, the 2013 event included 26,839 race entrants and more than 500,000 spectators in attendance. The two pressure-cooker bombs resulted in three fatalities and left over 250 people injured. On April 18, the Federal Bureau of Investigation released photographs and surveillance video of two suspects. In the ensuing manhunt for the second suspect, the authorities asked residents of Watertown and surrounding areas, including Boston, to stay indoors, or “shelter-in-place.”

In each of these events, communication played a pivotal role. While history has seen many more examples of impactful and disruptive events, the best practices learned from these five highlighted instances can be applied broadly across many common crises scenarios.

Best Practice – Develop and test a plan for clear communication
While disasters and crises can be, by their nature, difficult or impossible to predict, a great deal can be gained by trying to anticipate and plan for large-scale disruptions. By incorporating a crisis communication strategy into its operations, an organization can address some of the challenges of in-crisis communication and guide staff through disaster and recovery. Advance planning helps reduce the number of errors that happen under duress, and can help ensure that messages have been received and that the right processes are followed.

Before the London Olympics, officials conducted a two-day “live test” with 2,500 participants, to prepare for possible disaster scenarios during the event. The test focused heavily on both cross-functional and cross-departmental communication. This advanced planning was driven, in part, from lessons learned during a previous local crisis – the 7/7 (July 2005) bombing in London that claimed the lives of 52 people and injured 700 more. National Olympic security coordinator, assistant commissioner Chris Allison explained, “[This live exercise] is for testing our first responders' capabilities, and what we have learned to make sure that we have got that in place from 7/7 …It is testing communication flows right from the very bottom from the constable or fire officer who is responding, right the way up to Cobra.”
To develop a plan for clear communication, organizations should consider the following strategies:

**Have a documented plan to address incidents, emergencies, and disasters.**
The Federal Emergency Management Agency (FEMA) in the U.S. recommends that every organization should develop and implement an emergency plan for protecting employees, visitors, contractors, and anyone who could be affected by crises. This plan should also include contingencies for building evacuation, sheltering from severe weather, and procedures for dealing with exterior hazards and acts of violence.

**Include a specific protocol for crisis communication.**
An effective crisis communication plan should account for messages to your impacted audiences, including customers, survivors and their families, employees and their families, news media, community members, company management, directors and investors, government officials, regulators, other area organizations, and suppliers. Consider the best methods for reaching these audiences, regardless of their location. Without a comprehensive plan to communicate with all affected stakeholders, an organization risks misinformation, brand damage, and confusion when impacted parties cannot find the information they need.

**Plan for a wide variety of potential crises.**
Brainstorm a list of potential crises and understand the region and the types of disasters most likely to have an impact on your organization. If you don't create message templates ahead of time, you risk incomplete or inconsistent messaging during a crisis — and misinforming your emergency responders or the people you need to protect.
Emergency notifications expert, Dr. Robert Chandler, identified six stages of a crisis: 1) Warning; 2) Risk Assessment; 3) Response; 4) Management; 5) Resolution; and 6) Recovery. Each of these steps is pivotal for organizations that want to control both minor and life-threatening events.

A plan for clear communication is vital, including consideration for each stage of a potential crisis; what, how, and to whom an organization communicates varies with each.

**Best Practice – Use both message maps and on-the-fly messaging**

Craft message maps for event stages in advance. Effective message maps deliver clear, consistent notifications, simplify complex concepts, and are appropriate before, during, and after an incident. Planning ahead also allows an organization’s leaders to consider how the message will affect and motivate all audiences.

In addition to establishing pre-planned messages, organizations should be able to easily create or update messages on-the-fly. When a new message must be created in the midst of a crisis, you need the tools to support both quick creation and quick delivery.

Both pre-planned messages and messages created on-the-fly need to be short, readable, and actionable. Messages should follow the Chandler’s 3-3-30 rule: three sentences, three key messages, and no more than 30 words.
The messages sent out by the City of Waltham and City of Watertown during the manhunt for the Boston bombing suspects are an example of short, readable, and actionable:

**Stay inside – Waltham Closed**  
(City of Waltham, MA - 04/19/2013 06:38:00 AM)  
“From the Mayor and Chief of Police. It is requested that Waltham residents remain in their homes and Waltham businesses to remain closed until the bombing suspect at large has been captured. Follow news for information. Please Do Not call the police department. Thank You for your cooperation.”

**Shelter in Place – Watertown MA**  
(City of Watertown, MA-04/19/2013 02:35:06 AM)  
“This is Detective Connors with the Watertown Police Department - there's an active incident in Watertown. Chief Deveau is advising all east end Watertown residents to remain in their homes. if you hear or see anything suspicious call the Watertown Police Department at 617-972 6500.”

If some recipients will receive the message via SMS, try to keep the entire message length within a single SMS message. If the message is going to be sent as an audio recording, the primary point should be covered in the first nine seconds.

**Best Practice – Target the individual, not the device**

When sending out critical messages, it is important to keep in mind that no single communication path works 100 percent of the time. Particularly in weather events, power outages can cause interruptions of internet, cell, and other communication services. A common problem during Superstorm Sandy was that cellphone tower power backups simple ran out after electric power was severed, despite the presence of a signal, leaving many recipients both literally and figuratively in the dark.

To increase likelihood of reaching people as quickly as possible, organizations should have multiple paths through which they can attempt messaging. The more communication vehicles available – cell phone, home phone, email, text messaging, fax, pager, or secure message – the more likely that respondents will receive critical messages when infrastructure is compromised.
Allowing recipients to specify path preferences – SMS instead of a voice call, for example – also helps organizations ensure that they reach contacts through the mode each contact monitors most frequently.

An important component of capturing multiple paths, however, is to still see each contact as an individual. This means that once the individual has received a message through a path, the message is confirmed as received, and additional attempts are not made. Limiting the amount of attempts made to each individual can help minimize infrastructure overload, and prevent organization from contributing to bandwidth issues in their attempts to get messages out. This is especially important in cases where bandwidth is compromised – for example, immediately following the Boston Marathon bombing, cell phone towers were overloaded with outgoing call attempts from concerned citizens. Not only did organizations that had the ability to send messages via email or SMS have a better chance of reaching their contacts, they also avoided contributing to the issue by avoiding taxing the overloaded cell towers.

**Best Practice – Leverage two-way communication**

The ability for organizations to engage in two-way conversations, rather than just sending notifications, can help them better gauge the severity of an incident, which contacts may need assistance, and how to best prioritize resources. Organizations can request additional information through polling, ask for feedback in the form of text and images, and allow users to submit their own on-the-scene reports. Organizations can also leverage recipient geographical information to plot a map of feedback and associated locations, helping to prioritize resources in crisis response.

In this manner, two-way communication can help organizations quickly create a more complete understanding of a crisis, before first responders even arrive on scene. In crisis events, this ability to very quickly prioritize and guide response can have a dramatic impact on event outcomes. For example, in an active shooting situation, including the Aurora tragedy, timelines tend to be quick – often under two minutes. In Aurora specifically, police had apprehended the suspect within ten minutes of the initial call. These quick timeframes for an active event mean that post-event response can have the greatest impact on casualty rates. Particularly, a complete understanding of victim locations, severity, and needs, created by swift, clear communication can be the difference between life and death.
Best Practice – Understand the cascading effect of incidents

One of the keys to crisis response is an understanding of the cascading effect of incidents. Incidents often have a far-reaching impact for organizations and contacts outside of the epicenter.

These effects can take many different forms – for example, during the multi-city shelter-in-place order following the Boston Marathon bombing, public transportation reaching as far as Connecticut was shut down. Corporations headquartered across the globe had locations in Boston, or employees visiting the city, that they needed to reach. And airports as far away as the west coast, fearing a large-scale terrorist event, suddenly went on high alert.

Certainly, geography is a major factor in whether or not an organization will feel the direct effects of a crisis, and whether cross-organizational coordination would be beneficial. But other factors, from industry to similarities in organization scope and size, can create a virtual network of organizations that would benefit from collaboration and communication.

Best Practice – Create situational intelligence through social media

During a crisis, social media can be an important input for situational intelligence, helping organizations to create a more complete understanding of an event. For example, during Superstorm Sandy, on-the-scene information was readily available through social media before, during, and after the storm:

- Over four million tweets featured the #Sandy hashtag
- Ten Sandy-related images per second were uploaded to Instagram
- Thousands of videos were shared on Youtube
- Google posted a dynamic crisis map including shelters and resource information
- Twitter users and GasBuddy.com provided gas availability updates.

This vast amount of content can be leveraged by organizations that have the tools to filter, analyze, and qualify it. Combined with information gathered through two-way communication, organizations can create an informed response plan that efficiently and effectively uses available resources.
Progressive organizations can also leverage social media as a method for citizen outreach. In the midst of Superstorm Sandy, Boston officials used social media as part of their multi-modal communication plan.

Every emergency is different; therefore, there is no blanket response that organizations can rely on to handle all crises. Because Boston administrators had a clear communication plan for Superstorm Sandy, they were able to handle this difficult situation and provide ongoing updates to constituents.

**Crisis Communication is Critical for Organizations**

In the past few years, we have felt the effects of an unprecedented number of disruptive events - from natural disasters to acts of man. The ability to communicate during these crises is critical for organizations of all sizes. By taking lessons from how critical communication was handled before, during, and after large-scale events, and applying them to our own crisis planning, we are better prepared for future occurrences. These best practices can improve existing crisis communication plans, and help organizations mitigate risk, protect the safety of employees, and prioritize resources where they are needed most.
About Everbridge

Everbridge provides critical communication solutions to more than 30 million end users in all major industries and government sectors around the globe.

Communication failures have historically plagued organizations in their ability to respond to and minimize the human, operational, and financial impact of critical events and emergency incidents. Everbridge began with a shared vision: empowering a single person to communicate with any number of people as easily as communicating with one person to save lives, protect assets, minimize loss, and ensure continuity of operations. Everbridge brings technology and expertise together at every level for a complete solution. Everbridge solutions match your unique needs, from safety and survival during a crisis to cutting costs and achieving efficiencies in your everyday operations. Our understanding of mass notification and interactive communication challenges is leveraged in everything we do, from how we build our technology from the ground up to the expertise of the people we hire and best practices we share with the community.

We design the Everbridge system according to several key tenets:

- **Target the individual** – not the device. Everbridge has the most comprehensive notification system available, offering more than 30 contact paths that can be designated by incident type or by escalation steps.

- **Ease-of-use during any situation** – emergency or daily use – so even a non-technical person can communicate effortlessly and without anxiety.

- **Speed and reliability of communications.** Every second counts in an emergency. With global datacenters and an infrastructure unparalleled in security and reliability, the Everbridge mass notification system is designed for rapid and efficient communications worldwide so your message will always go through.

- **Universal accessibility** – with a fully managed system requiring no hardware, no software, no maintenance, and a flexible pay-as-you-grow model, organizations large and small have access to the same powerful communication capabilities.

- **Scalability** – the Everbridge mass notification system provides the ultimate flexibility in communication capabilities to meet changing needs in today’s dynamic environment. The Everbridge system is inherently scalable to grow with and adjust to the requirements of any organization quickly and without disruption to internal processes, infrastructure, or resources.

Visit [www.everbridge.com](http://www.everbridge.com) to learn more.