Effective Risk Communications for the Counter Improvised Explosive Devices Threat

Communication Guidance for Local Leaders Responding to the Threat Posed by IEDs and Terrorism

Volume I

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INTRODUCTION

The goal of this project was to review the risk communication literature to identify effective methods for government officials and civic leaders to warn and instruct the public on appropriate actions to take before, during, and after a terrorist attack using an improvised explosive device (IED). The ultimate goal of DHS is to enhance the preparedness, safety, and resilience of the American people against the threat posed by improvised IEDs.

This document consists of two volumes. Volume I reports the findings of the literature review as well as the findings from a conference of experts from government, academia, and industry conducted in September 2010. Volume II contains detailed research reports and supporting references for the literature review. It also provides detailed guidance for local leaders.

The project's three objectives were to develop:

- recommendations of practices and procedures for local leaders to consider before, during, and after an IED attack;
- research-based findings that can serve as the foundation for human behavior modeling of risk communication and its effect on individual and group behavior; and
- research-based findings that can serve as the basis for an executive training program and public education campaign.

BACKGROUND

Terrorism is a form of communication employing physical violence in the hopes of achieving specific political objectives. Improvised explosive devices (IEDs) are one means terrorists employ in delivering this message.

Recent experience, both in the United States and in other countries, has shown that IEDs provide terrorists a low-risk, anonymous and highly effective means of communicating with those whom they consider their enemies.

The United States has had little experience in dealing with IEDs. As a result, local officials have little experience or training in how to properly instruct the public in safety measures they should take before, during and after an IED attack. Experience gained by local leaders is often through managing public information and security related to natural disasters or technological incidents, or criminal activity such as serial crimes, kidnappings, gang violence, and protests or civic disturbances.

Americans have experienced relatively few violent terrorist incidents that posed a significant threat to public safety. The collective memory of Americans consists of only a handful of such incidents:

- the 9/11 World Trade Center and Pentagon attacks;
- the 1996 Atlanta Olympics;
- the 1995 bombing of the Murrah Federal Office Building in Oklahoma City;
- the Unabomber attacks from 1978 to 1995; and
- the anthrax and sniper attacks in the Washington, D.C. metropolitan area in 2001 and 2002.

Consequently, it is only rarely that civic officials in the United States issue warnings or instructions about direct threats to public safety and security posed by terrorists.

Although rare in the United States, notable terrorist incidents in other countries have garnered attention in the U.S. media in recent years. These include:

- the October 2002 Bali bombings that killed 202 people and injured 240;
- the March 2004 Madrid train attacks during which ten explosions on four commuter trains during rush hour killed 191 and injured more than 1,800;
- the July 2005 London bombings that killed 52 people and injured hundreds in a series of four coordinated suicide bomb attacks on the public transportation system; and
- the ten coordinated shooting and bombing attacks across Mumbai in November 2008 that killed 175 people and injured 308.

IED attacks that occur in Afghanistan and Iraq have often been characterized by the media as acts by "insurgents" rather than by "terrorists." Because the attacks target U.S. and other nations' military forces, they are viewed as acts of war, not as acts of terrorism. As a result,

many Americans relate IEDs to military actions and as tragic acts perpetrated against military servicemen and women in war zones.

Despite the limited use of IEDs in the United States, 80 percent of respondents to a Gallup survey conducted in November and December 2009[1] said they were familiar with the term "improvised explosive device." Most respondents recognized the possibility of terrorist acts occurring within the United States. According to the Gallup survey, approximately two thirds of respondents believed the United States would likely be attacked by an IED during the next two years. However, less than 10 percent of respondents believed an IED attack would occur in their community.

Q. "Are you familiar with the term Improvised Explosive Device or IED?"

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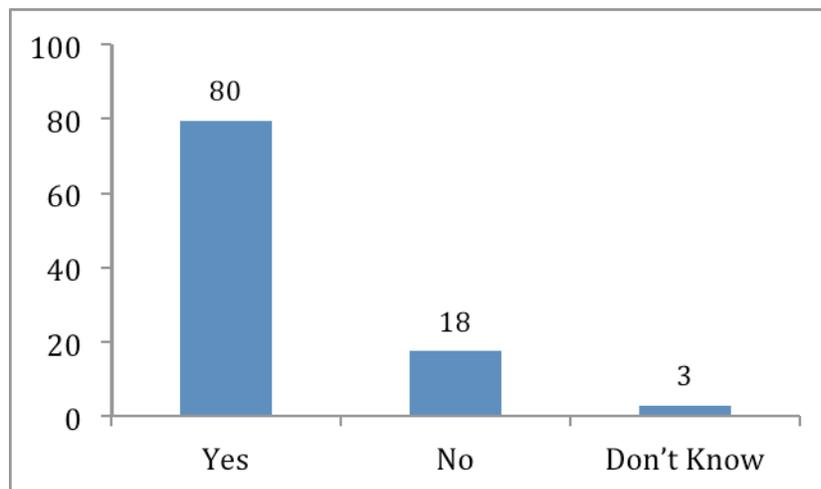
[1] Gallup, Inc. (2010). Presentation at The George Washington University Homeland Security Policy Institute conference on "Improvised Explosive Devices: Perceptions and the Domestic Threat." The George Washington University, Washington, D.C.

Q. "As you may know, an IED is a homemade explosive. It is a preferred weapon for terrorists, extremists, and criminals. Examples include, but are not limited to, the 1996 Centennial Park Olympics bombing in Atlanta, the 9/11, Pentagon, and World Trade Center attacks, and the 1995 Oklahoma City federal building bombing. In your opinion, how likely is the United States to be attacked by an IED during the next two years?"
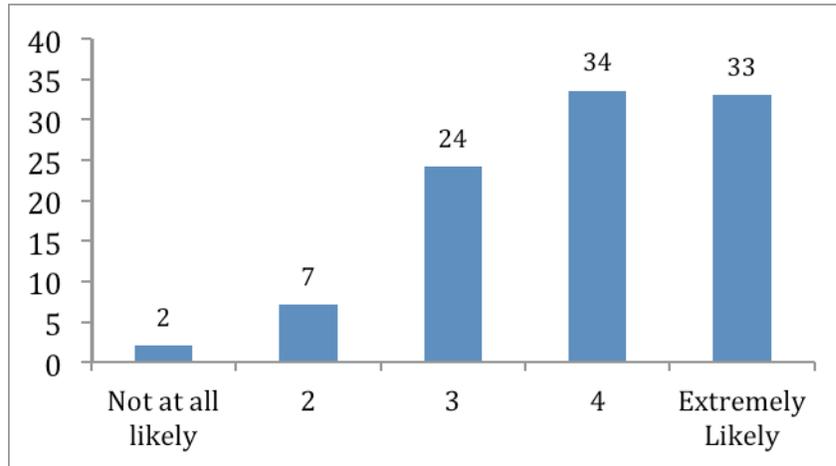
Q. "In your opinion, how likely is your community to be attacked by an IED during the next two years?"
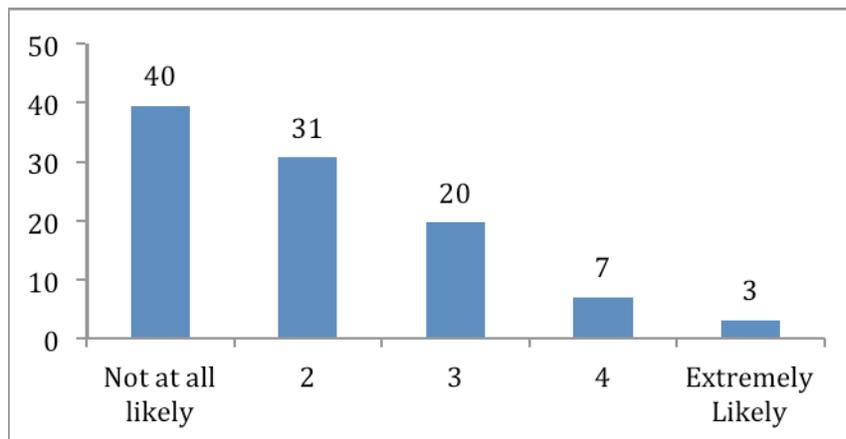
If terrorists were to successfully stage a coordinated attack or multiple attacks against the American people using IEDs targeting public gathering places, the challenge to public safety and security would be complex and would have national implications. In a free and open society, it is virtually impossible to ensure the safety of all citizens and the protection of all targets against every possible terrorist threat. As a consequence, it is critical that civic officials understand the steps that can and should be taken at the local, regional, and national levels to inform the public and to manage the security challenges posed by terrorism. The

ability of public officials and emergency responders to provide information quickly and accurately is critical to saving lives, preventing widespread damage, and maintaining social cohesion and the citizens' trust in government.

The threat of IED attack is shared almost universally by U.S. communities and citizens, private-sector enterprises and public-sector agencies. Consequently, the community of interest (COI) for this research effort includes first responders, public officials, and agency leaders at the federal, state, regional and local level.

PROJECT OVERVIEW

The project team reviewed the research literature on current knowledge and practice for hazard and risk warnings issued to the public in the case of terrorism threats, and specifically terrorism involving improvised explosive devices (IEDs). The project involved the following specific tasks:

Task 1: The project team reviewed the research literature on existing guidance, lessons learned, best practices and methodologies for issuing hazard and risk warnings relevant to the problem posed by a terrorist attack on a civilian population through the use of IEDs. The literature reviewed included scholarly research and analytic work; relevant government documents at the federal, state, and local levels; and best practices and recommended procedures from private-sector business and security communities. It also included relevant literature from non-terrorist risk communications – such as natural and manmade disasters – that might enhance understanding of procedures applicable to the threat of terrorism.

The research review addressed three dimensions of communications theory and practice:

- the manner in which hazard and risk communications are framed and presented by officials and the influence of factors such as familiarity, authority, credibility, and trust;
- the effects and influence of the medium through which the message is delivered and communicated to the public (i.e., via formal warning and emergency broadcast systems; through the public media (print and electronic); and via hand-held digital devices such as cell phones and hand-held PDAs); and
- the way the message is received by its intended audience and its effectiveness in accurately conveying information that is understandable and actionable.

Task 2: The project team reviewed the research literature related to the current state of practice for public information campaigns, and hazard and risk warnings in countries – United Kingdom, Israel, India, and Spain – that have experienced domestic terrorism involving the use of IEDs.

Task 3: The project team reviewed the research literature related to IEDs, and current and emerging practices in the use of "Web 2.0" digital communications. The review included the literature related to the use of cell phones, camera phones, hand-held PDAs, Internet social networking sites, and text messaging. Three dimensions of the emergence of these technologies were explored:

- the use of digital hand-held communication devices (cell phones, PDAs, laptop computers, etc.) for transmitting hazard and risk warnings to members of the public who principally rely on these devices for news and communications (i.e., younger people, college students, business-people, etc.), and current practices and plans for incorporating these devices into more traditional hazard and risk warning systems;

- the implications of these devices on public risk perceptions of terrorism and the counter-terrorism efforts of authorities and government officials, given the prevalence of these devices among citizens, and the recent use of these devices for disseminating awareness of local disasters and emergencies (i.e., the attacks on the Omni Hotel in Mumbai, India; the transmission of images to the media and Internet by Iranian citizens during the elections in Iran; and the use of digital images and locally-generated hazard warnings during the 2008 wildfires in San Diego and San Bernardino Counties, California); and
- the potential use of these devices by local authorities and first responders for communication and coordination of civil populations in the immediate aftermath of terrorist attacks, localized emergencies and disasters.

Task 4: The project team convened a two-day conference of Subject Matter Experts consisting of renowned academicians, seasoned practitioners, and senior government officials. Attendees are listed in Appendix 1. The purpose of the conference was to review preliminary results of the research project. The combined experts reached a number of recommendations. These are shown in Appendix 2 to this volume. A list of references used as the basis of preliminary results is contained in Appendix 3.

THE IED THREAT

An improvised explosive device (IED) is a bomb or explosive device used to destroy, incapacitate, harass, or distract. The term, IED, came into common usage in 2003 during the Iraq War. Terrorists, criminals, vandals, suicide bombers, and insurgents have used, and continue to employ, IEDs.

Terrorists engaged in a hostile action are likely to use IEDs. IEDs are widely recognized as being among the weapons of choice of terrorists throughout the world. The reasons are clear – the materials to make IEDs are often easy to find, the devices are relatively simple to construct, they are difficult to combat, and they can be devastatingly effective. As noted in a 2008 report by the National Science and Technology Council:

> The threat of explosives attacks in the United States is of great concern
> considering terrorists' demonstrated ability to make, obtain, and use explosives;
> the ready availability of components used in the construction of Improvised
> Explosive Devices (IEDs); the relative technological ease with which an IED can
> be fashioned; and the nature of our free society (NSTC, 2008).[2]

IEDs can come in many forms, ranging from a small pipe bomb to a sophisticated device capable of causing massive damage and loss of life. IEDs can be carried or delivered in a vehicle; carried, placed, or thrown by a person; delivered in a package; or concealed on the roadside. An IED can be initiated by a variety of methods depending on the intended target.

The extent of damage caused by an IED depends on its size, construction, and placement. It also depends on whether it incorporates a high explosive or propellant and the type of bomb. Vehicle bombs, also known as vehicle-borne IEDs (VBIEDs), can carry significantly more explosive material and therefore inflict more damage.

An IED can do extensive damage to structures. For example, an IED exploding in or near a building or public transportation venue may blow out windows, destroy walls, and shut down building systems such as those for power, ventilation, fire suppression, water and sewage. Exit routes may be disrupted or destroyed, and smoke and dust may travel upward through stairways and elevator shafts making navigation difficult. Building failure may result in the release of hazardous materials such as radioactive isotopes used in medical diagnosis and radiation therapy, or asbestos insulation.   An IED attack may cause disruptions in municipal services such as electricity, water, communications, and transportation, which may continue for days to weeks after the attack.

An IED explosion can be followed by the explosion of second devices or multiple explosions can occur near simultaneously. For example, a known terrorist tactic used in Israel, Northern Ireland, and elsewhere is to detonate one IED to attract bystanders to a window or gathering

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[2] NSTC (2008). Research Challenges in Combating Terrorist Use of Explosives in the United States. Executive Office of the President, National Science and Technology Council, Subcommittee on Domestic Improvised Explosive Devices, Washington, D.C.

point and to elicit the arrival of first responders, and then to detonate a second destructive device. There also may be bombings at multiple locations. Rescue efforts can be severely hampered by the need to respond to more than one site.

Prominent Examples of Terrorist IED Attacks

Oklahoma City Bombing

On the morning of April 19, 1995, a truck bomb exploded in front of the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma. The bomb was improvised from ammonium nitrate fertilizer and nitromethane, which were put into the back of the truck and left to explode. It was the worst terrorist attack on U.S. soil up to that time, killing 169 people. Timothy McVeigh was convicted and executed for the crime; his accomplice, Terry Nichols, is serving a life sentence in federal prison.

Madrid Train Attacks

Ten explosions occurred on four commuter trains during rush hour on March 11, 2004, in Madrid, Spain. The bombs were made from bags stuffed with explosives and metal fragments. Cell phones with timers were used to initiate the explosive devices. This attack, which was carried out by Islamist extremists, killed 191 people and injured more than 1,800.

London Bombings

Fifty-two people were killed and hundreds more injured in a series of coordinated attacks on the London transportation system on the morning of July 7, 2005. The attacks were carried out by four suicide bombers.

Olympic Park Bombing

In the midst of the 1996 Olympics, an IED composed of "pipe bombs" concealed in a backpack exploded in Centennial Olympic Park in Atlanta, Georgia, where the games were being hosted. The bomb contained nails to increase its lethality. Two people died and many were injured. Eric Rudolph pleaded guilty in 2005.

RESPONSES TO TERRORISM VS. OTHER EMERGENCIES

Research indicates there are fundamental differences in public response to an emergency resulting from a natural or manmade hazard, and public response to an emergency resulting from a terrorist act. A large number of studies indicate psychological, behavioral, and social responses to a terrorist attack are greatly different from responses to other types of emergencies and disasters.

As Gerber et al. (2006) state, a terrorist attack "comes without warning (unlike a hurricane), comes with the possibility of multiple attacks (unlike an industrial accident like a chemical release), and presents a highly unfamiliar hazard to the public (at least in the U.S.)." [3]

Research indicates these characteristics of a terrorist attack greatly increase the level of fear as well as people's propensity to self-evacuate. If the information provided to people is unclear, conflicting, or inadequate, the propensity to flee could be increased even further. More generally, poor or ineffective risk communication typically results in the human behaviors that include the loss of trust, reduced likelihood that people would take the appropriate protective actions, and greater loss of life and property.

Some of the most significant human behaviors expressed in a terrorist attack include:

- fear, anxiety, and distress
  (Where can we turn? What awful and horrible things are ahead? What do we do now?);
- anger (How could they do such a horrible thing? What kind of person would do such horrible things? Don't they care about their innocent victims?);
- misery, depression, and empathy (Will things ever be the same? What can you possibly say to the families of victims?);
- hurtfulness (Why do they hate us so much? What have we ever done to them that would justify their actions?);
- revenge (How can we get back at them?); and
- guilt (How come we survived and others didn't? How dare we still care about day-to-day trivia?).

Four characteristics of a terrorist attack are critically important in predicting or modeling public response:

- the intentionality of the attack;
- the large uncertainties associated with the attack;
- the lack of warning of the attack; and

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[3] Gerber BJ, Ducatman A, Fischer M, Althouse R, Scotti JR (2006). The Potential for an Uncontrolled Mass Evacuation of the DC Metro Area Following a Terrorist Attack: A Report of Survey Findings. Report presented to Secretary James W. Spears, West Virginia Department of Military Affairs and Public Safety. West Virginia University, Morgantown, West Virginia. www.hsp.wvu.edu/r/download/20487

- the unfamiliarity of the attack.

Almost every instance of terrorism presents a profoundly new and previously unknown set of circumstances – to leaders, to emergency response officials working to manage the situation, and to the public at large. Individuals and communities will be trying to cope with the situation and take necessary actions to protect their health and safety while events are still unfolding. In addition, because of uncertainties such as the possibility of secondary devices, the first few hours and days are likely to be characterized by rumors and unclear, inadequate, or conflicting information.

These four characteristics of a terrorist attack – intentionality, uncertainty, lack of warning, and unfamiliarity – have distinct impacts on human behavior: how the public thinks, feels, and responds to information. For example, they profoundly contribute to heightened perceptions of:

- lack of control (for example, by heightening perceptions that the unfolding events are largely outside our control);
- involuntariness (for example, by heightening perceptions that risks are being imposed upon us);
- catastrophic potential (for example, by heightening perceptions of permanent and irreversible catastrophic harm and loss); and
- dread (for example, by heightening perceptions of fear and apprehension associated with what appears to be an unending series of negative events).

Compounding these perceptual problems is the realization by local officials and the community that community plans and procedures for responding to an emergency may become largely inoperable during and after a terrorist attack. For example, most communities have plans for responding to emergencies based on natural hazards. These plans are often exercised and include recommended operational responses, protective actions, evacuation routes, and methods to quickly alert the public. Unfortunately, these plans may become inoperable during an effective and well-executed improvised explosive device (IED) terrorist attack. Terrorists may:

- block access to critical emergency response equipment;
- block access to environmental monitoring equipment;
- block access to emergency vehicles;
- block evacuation routes;
- kill or injure key emergency response personnel;
- use hostages for extortion; and
- use knowledge obtained from hostages to defeat attempts at intervention, rescue, and recovery.

RISK COMMUNICATION AND IEDs

Effective risk communication establishes public confidence in the ability of an organization to deal with a risk, such as an improvised explosive device (IED) attack. More than 8,000 peer-reviewed scientific articles and more than 2,000 books have been published during the past 30 years about effective risk communication.

The National Research Council/National Academy of Sciences has defined risk communication as "an interactive process of exchange of information and opinion among individuals, groups, and institutions."[4] Numerous studies have highlighted the importance of effective risk communication in enabling people to make informed choices and participate in deciding how risks should be managed.

Effective risk communication provides people with timely, accurate, clear, objective, consistent, and complete risk information. It is the starting point for creating an informed population that is:

- involved, interested, reasonable, thoughtful, solution-oriented, cooperative, and collaborative;
- appropriately concerned about the risk; and
- more likely to engage in appropriate behaviors.

Effective risk communication is critical during an IED attack. Under normal circumstances, for example, the elaborate infrastructures and mechanisms that protect the nation's security often go unnoticed. In the middle of an IED attack, however, there will be intense interest.

The primary objectives of effective risk communication before, during, and after an IED attack are to:

- build, strengthen, or repair trust;
- educate and inform people about risks;
- build consensus about appropriate actions to take;
- raise community awareness of plans for responding to additional attacks or emergencies; and
- disseminate information on protective actions people should take during and after the emergency.

Risk communication during an IED attack will directly influence events. Poor risk communication can fan emotions, and undermine public trust and confidence. At worst, poor risk communication can create an atmosphere where human behaviors include extreme stress, conflict, and additional crises. Good risk communication can rally support, calm a nervous

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[4] National Research Council/National Academy of Sciences, "Improving Risk Communication," National Academy Press, 1989: p. 21

public, provide needed information, encourage cooperative behaviors, and potentially help save lives.

Effective risk communication is a key responsibility of leaders and emergency responders before, during, and after an IED attack. For example, during an IED attack, the public, news media, policy makers, and other stakeholders will demand timely, accurate, and quality information. A leader or spokesperson who communicates badly may be perceived as incompetent, uncaring, or dishonest, thus losing trust. One who communicates well, however, can reach large numbers of people with clear and credible health, safety, and security messages.

While the specifics of a terrorist event are difficult to predict in advance, risk communication strategies for such events can be planned before the event occurs. Such planning greatly increases the likelihood that communication will contribute positively to emergency response efforts. Well constructed, practiced, and delivered messages will inform the public, reduce misinformation, and provide a valuable foundation for informed decision making.

Although many of the principles of risk communication involve elements of common sense, a considerable body of scientific research supports the principles. Several reviews of the literature have been published by major scientific organizations such as the National Academy of Sciences[5] in the United States and the Royal Academy of Sciences in Great Britain.

One of the main principles of risk communication is that human behavioral factors indicate that when people are highly upset, they often have difficulty hearing, understanding, and remembering information. Research shows the mental stress caused by exposure to real or perceived risks can significantly reduce a person's ability to process information. Factors that cause the highest levels of worry, anxiety, and mental stress during an emergency include, but are not limited to, perceptions that:

- the situation is under the control of others, especially those who are not trusted;
- the situation is involuntary;
- the situation is inescapable;
- the emergency is of human origin versus natural origin;
- the emergency involves a type of risk that is unfamiliar or exotic;
- the emergency threatens a form of injury or death that is dreaded;
- the emergency is characterized by a great deal of uncertainty;
- the emergency is likely to cause injury or death to children, pregnant women, or other vulnerable populations.

One of the greatest challenges for risk communicators is to overcome the communication barriers created by such anxiety provoking factors. A primary goal of IED risk communication is to inoculate people against, or counteract, the social and economic

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[5] National Research Council/National Academy of Sciences, (1989) "Improving Risk Communication," National Academy Press.

messages that terrorists intend to convey. Local leaders and emergency response officials have learned, sometimes the hard way, that institutional pressures and deeply rooted processes and biases can get in the way of effective risk communication.

In the specific case of an IED event, risk communication:

- warns citizens of imminent attack;
- provides citizens pre-, and post-, event instructions to reduce potential injuries, casualties, and disruption;
- gains the assistance of citizens in identifying suspicious activities or indicators of terrorist activities; and
- enhances social cohesion, social resilience, and confidence in risk management authorities.

The ability to implement successful IED risk communication requires two, equally important elements:

- an educated, alert, and aware public; and
- leaders with the communication skills needed to convey appropriate messages before, during, and after an IED attack.

Based on the literature review, both of these elements are currently missing. Many members of the public are not educated about, alert to, and aware of their vulnerability to, and the threat posed by, an IED attack. Many in positions of authority lack the communication skills needed to convey appropriate messages before, during, and after an IED attack.

The immediate focus of this project is on communication skills that can be used by leaders to mitigate the effects of an IED attack. However, effective risk communication skills are transferable to other types of disasters and crises, natural or manmade. Risk communication skills are critical to all successful exchanges of information with the public, the media, and other stakeholders about all risks, regardless of the cause.

LESSONS LEARNED FROM IED OR OTHER TYPE OF TERRORIST ATTACK

This section contains risk communication lessons learned from emergencies resulting from an improvised explosive device (IED) or other type of terrorist attack. The lessons learned are derived from the emergency risk communication literature as well as the literature on major terrorist attacks, including the terrorist attack on September 11, 2001 of the World Trade Center in New York City, the terrorist attacks in London on July 7, 2005, the terrorist attack in Oklahoma City on April 19, 1995, and the terrorist attacks in Mumbai, India in November, 2008.

Listening and Caring

- Listen to and acknowledge fear and anxiety. When people are stressed, anxious, or worried, they want to know you care, before they care what you know.
- Appear calm and in control, even in the face of public fear, criticism, and anxiety. Provide people with ways to participate, be constructive, and channel their energy.
- Offer authentic statements of caring, compassion, and empathy. Listen carefully to what others are saying. Back up statements of caring and empathy with actions.

Presentation

- Recognize that people will often fixate on the negative in high stress situations and be extremely careful in offering up the five "N" words – no, not, never, nothing, none – as well as words with strong negative connotations.
- Be the first to share bad news. Formulate "bad news" messages according to the formula 1N=3P (one negative equals three positives in high stress situations).
- Avoid mixed or inconsistent verbal and non-verbal messages.

Messaging

- Practice and hone media verbal and non-verbal skills. Avoid media traps and pitfalls (for example, speculating on worst case scenarios, offering guarantees, providing over reassurance, making promises, repeating words with strong negative connotations, and repeating allegations or accusations).
- Be honest, transparent, ethical, frank, and open, but recognize there are limits on what can or needs to be shared or disclosed.
- Avoid using humor. If humor is needed to relieve stress, plan, test, and use it carefully.

Message Development

- Develop and offer top-line key messages with three bullet points. Stay on message. Avoid the comment "no comment."
- Keep it simple and short (the KISS principle). Use clear, non-technical language, free of jargon and acronyms.

- Make extensive use of visual material (for example, graphics, photographs, maps, tours, on-site visits, demonstrations, animation, video clips, analogies, and anecdotes with a clear point).
- Check and double-check the accuracy of facts. Have all written material proofread by someone not directly involved in responding to the event.

Uncertainty

- Acknowledge the importance of uncertainty. People tend to trust most those willing to acknowledge the importance of uncertainty. For example, "Our guidelines and advice are likely to be interim and fluid, subject to change as we learn more."
- Bracket messages containing numbers with statements of uncertainty.
- Repeat messages. Recognize that people under stress have difficulty hearing, understanding, and remembering messages.
- Encourage people to think probabilistically. Consider making uncertainty the message, not the preamble to the message.
- Avoid playing guessing games with numbers. Following a terrorist attack, leaders will be under tremendous pressure to provide numbers, such as those about casualties, injuries, damages, and costs. If numbers are offered, they must be bracketed with explicit statements of uncertainty (What we don't know) followed by statements of fact (What we do know), followed by statements of action (What actions are being taken and what we are doing to get better information). For example, Rudolph Giuliani, former Mayor of New York City, when pressured for casualty numbers on September 11, 2001, responded, "The final numbers will be more than we can bear. And I believe we will become stronger. Stronger economically, politically, and most importantly, emotionally."

Organization

- Do advance scenario planning. Identify key stakeholders and primary audiences. Anticipate questions and concerns. Prepare, in advance, responses to anticipated or frequently asked questions and rehearse responses (for example, through training, exercises, and simulations).
- Provide information on a continuous and frequent basis. Prevent the formation of information voids that can be filled by others.
- Coordinate all inter-organizational and intra-organizational communications. Speak with one voice or, at least, in harmony with others.
- Avoid town hall meetings, which, unless carefully planned, controlled, and skillfully implemented, often increase public frustration and outrage. Encourage people to attend open houses, information exchanges, and expert availability sessions. Engage people in face-to-face communications.

Warnings

- Provide people with carefully crafted warnings. Warnings inform people of an impending hazard or disaster, and provide essential information on what to do before,

during, and after. The purpose of emergency warnings is to prompt people to take immediate actions that save lives, reduce injuries, and protect property.

- Provide people with:

    - timely warnings about what is likely to happen;
    - frequent notifications about what is happening; and
    - clear advice about what to do.

- Provide people with warnings that:

    - are clear;
    - are perceived as coming from a credible source of information;
    - are focused on a specific anticipated event;
    - are designed to motivate people to act;
    - are consistent with common sense;
    - call for a concrete set of actions;
    - contain specific guidance about what people should do to maximize their safety;
    - are consistent with other information;
    - are targeted to a particular segment of the population (paying particular attention to their perceptions of the credibility of different sources, their access to different warning channels, their reactions to warning message content, and the incentives, disincentives, and constraints they are likely to experience in attempting to take protective actions); and
    - are perceived as representing a realistic, imminent threat.

- Do not become preoccupied with the "cry-wolf" syndrome. The "cry-wolf" syndrome (i.e., people show decreasing response to warnings when they have experienced several false alarms) is largely a myth. It is contested by several empirical studies. The "cry-wolf" syndrome typically occurs only when the reason for the false alarm is not communicated effectively to the public (Baker, 1987).[6]

Leadership

- Be highly visible.
- Inform colleagues and family of the need for them to strictly conform to official policy recommendations; perception equals reality; what is perceived as real is real in its consequences.

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[6] Baker, E. J. 1987 Evacuation in response to hurricanes Elena and Kate. Unpublished draft report. Florida State University, Tallahassee, Florida.

- Avoid attacking the credibility of those with perceived higher credibility; join hands, as appropriate, with adversaries; actively seek out third party endorsements and support.
- "Walk the talk" and go the extra mile; lead the way.

Leadership Attributes During an IED Attack

- Acknowledging fear and anxiety.
- Appearing calm and in control of ones emotions, even in the face of public fear and criticism.
- Repeating allegations or accusations.
- Offering people things to do, to participate to be constructive, and to channel their energy.
- Being the first to share bad news.
- Avoiding mixed or inconsistent, verbal and non-verbal messages.
- Avoiding media traps and pitfalls (for example, speculating on low probability, worst-case scenarios, offering guarantees, providing over reassurance, making promises that can't be kept).
- Avoiding using humor (if humor is needed to relieve stress, it should be used very carefully and strategically).
- Being highly visible.
- Informing colleagues and family of the need to strictly conform to official policy recommendations. Perception equals reality; what is perceived as real, is real in its consequences.
- Avoiding attacking the credibility of those with perceived higher credibility; join hands, as appropriate, with adversaries.
- Actively seeking out third-party endorsements and support.
- Providing information on a continuous, frequent basis; prevent the formation of information voids that can be filled by others.
- Coordinating all inter-organizational and intra-organizational communications so as to speak with one voice or at least in harmony with others.
- Avoiding town hall meetings, which, unless carefully planned, controlled, and skillfully implemented, can increase public frustration and outrage.
- Encouraging people to attend open houses, information exchanges, and expert availability sessions.
- Engaging people in face-to-face communications.
- "Walking the talk;" go the extra mile; lead the way.

TRUST AND CREDIBILITY

Personal experience of risk has been increasingly replaced by information about risks. Institutional risk management has replaced individual control over risk. As consequence, people rely more than ever on the credibility of those from whom they receive information about risk. Thus, trust is a major key for risk communicators.

Trust relies on seven components: perceived competence; objectivity; fairness; consistency; sincerity; empathy; and faith. The more trust an audience has in the communicator, the more credibility that communicator will have. Trust and credibility combine, and lead to confidence.

Improving trust in a communicator requires developing a communication climate that enables the audience to identify with the communicator, and to share his or her experiences and beliefs. The more a communicator manages to avoid the mask of an institutional spokesperson, and the more he or she can express compassion and empathy for the audience, the more likely the audience will identify with the speaker and feel compelled to heed the information.

The vital factor in improving credibility is performance, not public relations. Credibility is also linked to evidence of being effective and open to public demands. Communication efforts should provide honest, complete and accurate information that is responsive to the needs and demands of the prospective audience. Governmental institutions will be more credible if they do not leave the impression of permanent crisis management, but of competence and preparedness for meeting threats and challenges.

Many different factors affect credibility. On the personal level, appearance, communication style, honesty, and creating an atmosphere of identification of the audience with the communicator are major variables that influence credibility. On the institutional level, the actual performance in terms of role fulfillment, cost-effectiveness, and public expectations, as well as openness to new claims and demands, constitutes confidence and helps build credibility. Furthermore, the social climate and the level of controversy associated with the issue affect the assignment of credibility, independent of the performance of the actors involved.

Caring and Empathy

Perceptions of caring and empathy can account for as much as 50 percent of the determination of trust and credibility in an improvised explosive device (IED) attack. Caring and empathy are expressed through words and non-verbal communication, and need to be backed up with action.

Trust is Most Critical to Effective IED Risk Communication

Without trust, it is virtually impossible to achieve the goals of effective IED risk communication. The trustworthiness of a message is typically judged by its content and by its source – "who is telling me this, and can I trust them"? If the answer to the latter is "no", the communication is likely to fail regardless of its content.

Trust can only be built over time. It is based on a proven record of listening, caring, competence, honesty, and accountability. In general, experts no longer automatically command the levels of trust observed in the past. Reliance on scientific credentials alone to establish trust is unlikely to prove effective.

Building trust is a long-term, cumulative process that needs to be started well in advance of an emergency. Trust is easily lost and once lost is difficult to regain. Research indicates that trust is more likely to be strong where:

- organizations are clear about their values and goals;
- there is openness and transparency about decisions;
- the organization is the first to announce bad news;
- early warnings have been provided;
- decisions are clearly grounded in scientific evidence;
- public values, concerns and perceptions are taken into account in decision-making;
- people perceive that authorities share their values;
- sufficient information is provided to allow individuals to make balanced, informed judgments;
- mistakes are quickly acknowledged and acted on by authorities;
- actions are consistent with words (judgments about trust often depend more on what is done than on what is said);
- uncertainty is acknowledged;
- excessive reassurance is avoided;
- others with high credibility support your statements and positions; and
- outrage and the legitimacy of fear and emotion are acknowledged.

COMMUNITY EDUCATION

An aware, informed, and engaged citizenry can be a vital partner in preparedness and response to an improvised explosive device (IED) attack. When provided the right information and engaged as legitimate partners in preparedness efforts, people can play a crucial role. For example:

- **People can help authorities recognize potential terrorist threats.**

  By recognizing suspicious behavior, people can help forestall terrorist threats to themselves and their communities. For example, the FBI and the Department of Homeland Security have issued fact sheets advising people about how to recognize suspicious behavior.

- **A population that is well educated about what protective actions to take translates into fewer deaths and injuries, fewer psychosocial and behavioral impacts, and increased societal resilience.**

  During and after an IED attack, critical information and direction will be released to the public through various media. If people carefully follow the directions provided, they can reduce the risks of injury or death, keep emergency routes open to response personnel, and reduce demands on landline and cellular communication.

- **Community-based drills and exercises are effective tools for public education about IEDs.**

  Countries such as Israel, living under a constant threat of attacks by IEDs and missiles, rely heavily on ongoing community-based drills.

  Research indicates drills that involve the public are one of the most effective ways to improve crisis preparedness. For example, community-based drills and exercises enable risk managers to:

  - assess the public's preparedness;
  - increase public consciousness about the threat posed by terrorism and IEDs;
  - provide opportunities for organizations and individuals to become familiarized with each other, build trust, and coordinate actions; and
  - use drills and exercises in media campaigns (including advertising, news coverage, and social media engagement) to raise attention and educate the public about ways of dealing with the specific threats of IEDs.

- **School programs are effective tools for public education.**

  Research, including research from countries such as Israel, indicates children:

  - are easier to educate than adults about protective actions;
  - can function as ambassadors to their families;

- can stimulate adult learning; and
- can assist adults in understanding the reasons and meaning of protective actions.

Community Education: The United Kingdom (UK)
A Case Example

The experiences dealing with IRA terrorists and other terrorist groups have had a profound effect on the way the UK responds to a terrorist attack. The UK approach is two pronged: one prong is focused on improving intelligence to prevent and counter terrorism. The other prong is focused on increasing community resilience against terrorist attacks.

In the UK, Local Resilience Forums (LRF) have been set up in communities throughout the country. The Civil Contingencies Secretariat, under the Home Office, is in charge of implementing the overall resilience strategy.

Community resilience is not focused exclusively on terrorist attacks. It is an "all hazards" program. It considers all kinds of threats and disruptions. The idea behind the local resilience approach is to:

- increase individual, family, and community resilience against all threats and hazards;
- support and enable existing community resilience;
- expand and develop successful models of community resilience;
- support effective dialogue between community members and emergency response practitioners;
- raise awareness and understanding of risk and local emergency response capability in order to motivate and sustain self-resilience;
- evaluate the success and articulate the benefits of community resilience;
- provide a shared framework to support cross-sector, regional, and local activity; and
- ensure sufficient flexibility to make community resilience relevant and workable in each local area and community.

A community resilience steering group oversees work of the local reslience group. The steering group is made up of community members, non-governmental organizations, relevant government institutions, and other stakeholders. The resilience program is an ongoing, institutionalized preparedness strategy for crisis management and crisis communication. In addition to identifying specific vulnerabilities of specific communities (for example, communities with a hazardous industry), it involves the public in emergency planning through direct participation or through information on the work of the local resilience group. The objectives of the program are to raise public awareness, improve preparedness, build trusting relationships, prepare spokespersons, prevent inter-organizational failures through cooperation, increase the public's knowledge about self-protective measures, and improve the ability of a community to engage in self-help.

CULTURAL DIVERSITY ISSUES AND IED COMMUNICATION

To be effective, improvised explosive device (IED) risk communication must be sensitive to cultural differences between and within populations from the various regions and nations of the world. Culture is grounded in a group's shared experience and identity, and in its relationships – both human-to-human and human-to-nature, objects, gods, and the cosmos. Definitions of culture typically include elements such as:

- meanings and interpretations;
- perceptions;
- behaviors;
- language;
- ways of expressing emotions and facts;
- identity;
- assumptions;
- rules, structures and theories for organizing experience;
- ways of interacting;
- beliefs, attitudes;
- thoughts;
- sense of self; and
- religion.

Several of the most important patterns of cultural difference that may affect risk communication before, during, and after an IED attack are described below. These differences are a potential source of cross-cultural communication difficulties and must be addressed.

Different Communication Styles

The way people communicate varies widely between and within cultures. One aspect of communication style is language usage. Across cultures, words and phrases are frequently used in different ways. For example, even in countries that share the same language, the meaning of the simple word "yes" varies greatly from: "definitely, I understand what you said" to "maybe" or "I'll consider it," along with many shades in between. Another major aspect of communication style is the degree of importance given to non-verbal communication. Non-verbal communication includes facial expressions and body gestures; it also involves seating arrangements, personal distance, and sense of time. In addition, different norms exist regarding the appropriate degree of assertiveness in communicating information. For instance, some cultures consider raised voices to be threatening or a sign of anger, whereas other cultures consider an increase in volume as a sign of excitement and commitment.

Different Attitudes Towards Conflict

Some cultures view conflict as a positive aspect of communication, while others view it as something to be avoided. In many cultures, open conflict and disagreements are viewed as embarrassing or demeaning – differences are worked out quietly behind the scenes.

Different Decision-Making Styles

The roles individuals play in decision-making vary widely from culture to culture. In some cultures, decisions are frequently delegated – i.e., an official assigns responsibility for a particular matter to a subordinate. In other cultures, there is a strong value placed on according decision-making responsibilities to the individual.

Although individual recognition and initiative are encouraged in some cultures, in others the collective good is emphasized, and individuals are encouraged to sacrifice individual recognition.

Majority rule is a common approach in many cultures, but in other cultures consensus is the preferred mode, or decision-making may be entrusted to an elder or exalted member of the community.

Different Attitudes Towards Disclosure

In some cultures, it is considered inappropriate to be candid about emotions, about the reasons behind a conflict or a misunderstanding, or about personal information. Questions that may seem natural to one culture may seem intrusive to another.

Different Approaches to Knowing

Significant differences occur between cultures in the way people come to "know" things. For example, some cultures consider information acquired through cognitive means (such as counting and measuring) more valid than other, less tangible, ways of knowing (such as intuition).

Different Ways of Engaging in Discourse and Conversation

When communicating with one another, individuals will follow the assumptions and rules governing discourse and conversation within their respective cultures. Because significant variations exist in the rules for conversation across different cultures, message design must be sensitive and appropriately tailored. Rules for conversation cover such diverse areas as:

- opening or closing conversations;
- taking turns during conversations;
- interrupting;
- using silence as a communicative device;
- incorporating appropriate topics of conversation or discourse;

- interjecting humor into a conversation;
- using laughter and humor as a communication device;
- using gestures to make or emphasize a point;
- using storytelling and narratives as a communication device;
- speaking for an appropriate amount of time; and
- sequencing of the elements of a speech or conversation.

In some cultures – particularly those with strong oral traditions – people often prefer storytelling and anecdotes as a conversation and communication device. Personal stories and anecdotes are useful tools for bringing information close in time and space to listeners. Stories in this tradition often presume a shared knowledge with the audience, do more showing than telling, imply linkages among a wide range of topics, and contain elements not necessarily presented in temporal sequence.

Differences in Accessing Information

Cultural, social, and economic factors affect virtually all communication decisions and choices, including:

- choice of media formats (affected, for example, by what proportion of the population can read); and
- choice of media technology (affected, for example, by what proportion of the population own radios, televisions, and land-line and mobile communication devices).

Guidelines on planning and implementing an effective and culturally sensitive IED risk communication program include:

- prepare, produce, and disseminate information using diverse forms of media and graphic arts appropriate to the culture;
- translate information materials for different language groups using trained, experienced translators, who also understand proper, cultural context;
- recognize the communication needs of special populations, including those with low literacy levels and those with perceptual, linguistic, or physical challenges;
- design, deliver, and ensure availability of more traditional or alternative forms of communication to meet the needs of special populations;
- apply culturally appropriate citizen engagement, public participation, and public consultation techniques to foster feedback from local populations; and
- take appropriate steps to enhance access to, awareness of, and use of communication materials by diverse populations.

ROLE OF SOCIAL MEDIA BEFORE, DURING, AND AFTER AN IED ATTACK

The death of distance and the collapse of time have come at the hands of information technology. Nowhere is this more apparent than in the use of social media. Numerous research reports demonstrate the explosive growth of social media at all levels in the private and public sector. Social media provide people with enhanced ways to converse, engage in dialogue, build relationships, listen to multiple voices, get messages quickly to others, and witness or participate in debates.

Within social media, there is an incredible opportunity to use digital hand-held communication devices for transmitting hazard and risk warnings to the public. Mobile communication devices are increasingly being used for information sharing, real time coverage of events, dissemination of information to family and friends about an emergency, location and safety updates of family members and other loved ones, and directions away from disaster sites. For example, during the 2007 Southern California wildfires, residents used mobile technology devices to fill information gaps and get information not available through traditional media. They used mobile communication devices to contact friends and family. They also used mobile communication devices and digital hand-held devices to search blogs, Web forums, and photo-sharing sites (such as Flickr and Picasa).

Challenges to the effective use of social media during and after an improvised explosive device (IED) attack include:

- technical challenges;
- security concerns;
- the potential for system overloads;
- the potential to block the delivery of critical information between emergency responders or to 911 services;
- limitations in the ability of individuals and groups to access and use social media technologies and software; and
- the potential for emergency personnel to inadvertently divulge sensitive information.

It is also questionable whether social media sites want to be responsible for communication during an emergency, such as an IED attack, or whether social media sites can or will build the infrastructure required to operate during a major terrorist incident.

"The real value of any communication – social media included – remains the quality of the content being disseminated, the actions an [organization] is taking, the empathy for affected stakeholders being displayed, and the appropriateness and relevance of the context and perspective being provided."[7]

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[7] Aherton, J. (2009). "Frontlineonline: Crisis Planning in the Digital Age." Paper presented at the International Public Relations Association Conference, October 2009. Surrey, United Kingdom. Retrieved from http://www.ipra.org/archivefrontinedetail.asp?articleid=1400.

ANTICIPATED QUESTIONS FOR LEADERS FOLLOWING AN IED ATTACK

A critical, first, strategic step in risk communication is to identify, as complete a list as possible, potential questions that would be asked by key stakeholders. The list should be based on a profile of the stakeholder group's situation, interests, and concerns.

Messages are most effective when they are specifically tailored to the characteristics of the target audience. Developing a profile helps identify questions that will be asked. For each target audience, the audience profile should consider:

- What is their current level of knowledge about the risk?
- What are their primary concerns regarding the risk?
- What do you want them to know about the risk based on their profile, interests, and concerns?
- What actions would you like them to take regarding the risk?
- What information is likely to be of greatest interest to them?
- What information will they probably want to know once they develop greater awareness of the risk?
- How much time are they likely to give to receiving and assimilating the information?
- Are there social or economic characteristics of this group that might affect the way they will process risk information (for example, trust in authorities; fatalism)?
- How does this group generally receive its information?
- In what professional, recreational, and domestic activities does this group typically engage that might provide avenues for distributing risk communication products?
- Whom does this group recognize as its leaders?
- Who are the most influential members of this group?
- How have members of this group responded to risk or emergency information in the past?
- Are there any organizations or centers that represent or serve the audience that might be avenues for disseminating your communication products?

Questions and concerns typically fall into two categories:

- **Informational Questions**
  The following are examples of informational questions. What do people need to know? What do people want to know? Am I safe? Is my family safe? What should people do? Is it safe for people to leave their homes?
- **Challenge Questions**
  The following are examples of challenge questions. Why should people trust what you are telling them? Why did you not do more to prevent this from happening? Can you give an absolute guarantee that people will be safe? Are you telling us the same things you are telling your own family?

Questions can be further refined by grouping them into categories. For example, one way to group questions is by the stakeholder who is asking the questions – journalists, elected officials, families of victims, or the public.

A second way to group questions is by phase of the emergency. For example, questions can be grouped by pre-event, event, response, and recovery.

A third way to group questions is by category of concern. For example, questions can be grouped by broad categories of concern such as: health concerns; safety concerns; environment/ecological concerns; quality of life concerns; political concerns; economic concerns; social concerns (e.g., trust, fairness, concerns about the welfare of children, vulnerable populations, or populations with specific needs); ethical concerns; and cultural concerns.

Lists of specific stakeholder questions and concerns can be generated through research, including:

- review and analysis of media stories (print and broadcast);
- review and analysis of Web sites;
- review and analysis of public meeting records;
- review and analysis of public hearing records and legislative transcripts;
- review and analysis of complaint logs, hotline logs, toll-free number logs, and media logs;
- review and analysis of blogs and social media sites (for example, Twitter, Youtube, and Facebook);
- focused interviews with subject matter experts;
- facilitated workshops or discussion sessions with stakeholders, special interest groups, and groups with special governance agreements (for example, Native American Tribal Governments);
- interviews with individuals experienced in radiological or other emergency situations;
- consultations with individuals or organizations that represent, or are members of, the target audience; and
- consultations with colleagues who have successfully developed other communication products for the target audience.

Research indicates local officials may be asked to respond to an enormous number of diverse and challenging questions following an improvised explosive device (IED attack. Case studies of IED attacks in the United States, United Kingdom, India, Spain, and Indonesia indicate local officials can expect to be asked over 77 basic questions about the IED attack, just based on the "five W's" – who, what, where, when, and why – and the "one H" – how. They can also expect to be asked several hundred additional questions specifically focused on the events and situation leading up to, during, and following an IED attack.

Volume II contains a sampling of these questions. These questions are derived in part from a review of questions asked during and after the terrorist attack on September 11, 2001 of the World Trade Center in New York City; the terrorist attacks in London on July 7, 2005; the

terrorist attack in Oklahoma City on April 19, 1995; and the terrorist attacks in Mumbai, India in November 2008.

SUMMARY:
LESSONS LEARNED AND RECOMMENDED BEST PRACTICES FOR LOCAL OFFICIALS

- Local officials need to become better informed about the threats posed by terrorism to their communities.
- Local officials need to inform themselves about the principles of effective improvised explosive device (IED) risk communications.
- Local officials need to become better informed about technical aspects of IEDs if they want to engage in constructive dialogue with emergency response officials and other stakeholders.
- Local officials need to be aware of, and responsive to, the differences between an emergency resulting from an industrial accident or natural hazard and an emergency resulting from a terrorist attack.
- Local officials need to be aware they may be asked to respond to an enormous number of diverse and challenging questions they may be asked during and after an IED attack.
- Local officials need to be aware of, and responsive to, how people form perceptions of trust. They also need to know how to influence these perceptions before, during, and after an IED attack.
- Local officials need to be able to communicate caring and empathy following an IED attack.
- Local officials need to be aware of the attributes that would mark an individual as an effective leader during an IED attack.
- Local officials need to be aware of how to use tools to develop effective messages about IEDs before, during, and after an IED attack.
- Local officials need to be aware of the importance of acknowledging uncertainty during and after an IED attack.
- Local officials need to do advance scenario planning for an IED attack.
- Local officials need to develop a comprehensive crisis communication plan for an IED attack.
- Local officials need to know how to construct an effective IED warning.
- Local officials need to aware that "panic" seldom occurs and when it does occur, a set of high, specific factors must be present.
- Local officials need to be aware of, and trained in, principles and techniques for dealing with the media before, during, and after an IED attack.
- Local leaders need to be sensitive to cultural diversity issues that can impede effective IED communication.
- Local officials need to be aware of local public perceptions, concerns, information needs, and information preferences related to the threat of an IED.
- Local officials need to be aware of the opportunities and challenges posed by the use of social media before, during, and after an IED attack.
- Local officials need to explore opportunities and implement programs to educate the local community about the threat posed by IEDs before, during, and after an IED attack.

CONCLUSIONS

- Leaders need to learn and understand what population segments comprise their communities, including: How do various audiences routinely receive information? Who has "influence" with various audiences? Whom do various audiences believe?
- Leaders need to be open to and willing to accept evaluations and critiques as part of their learning and training process.
- Leaders need to promote vigilance, preparedness, resilience, and deterrence by the citizens of the community for an improvised explosive device (IED) attack.
- Leaders need to commit time and energy to advanced scenario planning, which includes identifying key stakeholders and primary audiences; anticipating questions and concerns; preparing in advance messages in response to anticipated or frequently asked questions; and rehearsing responses through exercises and simulations.
- Leaders need to avail themselves of experts/senior mentors in public service, academia, field practice and operations, from national and regional levels.
- Leaders need to establish a significant interest within their community to combat the threat of IEDs, including, but not limited to: business and union leadership, local elected government officials, career government employees, faith-based leaders, secondary and post-secondary education leaders, and other community leaders.
- Leaders should incorporate digital media platforms and strategies into their IED communication planning and execution, including how their communities currently utilize social media and determine best practices as well as communication implementation and message coordination for platforms such as SMS text messaging and Internet-based platforms such as Facebook, blogs and Twitter.
- Leaders should continue to focus on traditional media – newspapers, television, and radio stations – from where a significant number of people continue to receive information.
- Leaders should identify behaviors and actions that – specific to the demographic, socio-economic group, and other identifiers – the public should exhibit in preparation for an IED threat or if an actual attack were to occur. Leaders must incorporate these specific behaviors and desired outcomes into their emergency communications plan and use them in their overarching strategy and tactical implementation.
- Leaders need training in risk communication as it relates to IEDs. Such training does not currently exist. The identification and development of such training needs to be based on an overall training strategy and plan. The training strategy and plan, in turn, needs to be based on the current state of knowledge regarding adult learning, with particular emphasis on training those in leadership positions. Training should be based on coaching, mentoring, seminars, modeling and simulation (M&S), and other best practices for training leaders.

APPENDIX 1: Conference Attendees

Randy Atkins	Sean Fitzpatrick	Richard Rotanz
Larry Bartosh	Karen Freberg	Piet Sellke
Steven M. Becker	Ethan Huffman	Mary Ann Simmons
Rachael Bynum	Bob Jensen	William F. Stephens
Arthur Click	Richard Lempert	Elise Hopkins Stevens
Rick Comley	Paul Morrell	Lyda Ann Quinn Thomas
Vincent Covello	Colonel Stephen Padgett, UK	Jonathan Thompson
Donna Dinkin	Michael Palenchar	Alex Tzavellas
Amy K. Donahue	Mark Pfeifle	Ted Tzavellas
Michael Dunaway	Frank Ritter	Robert Ulmer

APPENDIX 2: Conference Recommendations

Conference participants identified an urgent need for a local leader, risk communication training program built upon the current research project. This program should be based upon a training strategy and plan. The strategy and plan address the gaps in organization, communication technology, experience, and knowledge that have been identified through the research and discussed during the conference. The training program should be designed to give local leaders the communication skills needed to influence and, if required, change public behavior and responses before, during, and after an IED attack. The training should focus on local government officials, senior first responders, and civic leaders. The training should be designed so the IED risk communication skills mastered in the training can easily be transferred to other natural or manmade disasters.

Conference participants agreed the training program should be based on:

- models of human behavior in response to emergencies and disasters;
- principles of emergency management that create a framework within communities to reduce vulnerability to hazards and to cope with disasters;
- current knowledge of, and best practices for, adult learning;
- current knowledge of, and best practice for, developing effective warnings; and
- current knowledge of methods for analyzing and assessing the impact of hazard and risk warnings, public service announcements, and communications to the public for specific threat scenarios.

The training program should have broad applicability for training local leaders in risk communication strategies to protect communities and citizens against hazards and threats from any source. Participants in the training should learn how to coordinate and integrate activities necessary to build, sustain, and improve a community's capacities to mitigate, prepare for, respond to, and recover from, an IED attack. The training should serve as a model for risk communication training on natural disasters, other acts of terrorism, and manmade disasters.

A Board of Advisors should be formed to advise the development of the training strategy, plan, and program. The Board should comprise elected and appointed leaders, emergency responders, and risk communication practitioners. They will provide mentoring and thought leadership as the program develops.

Conference participants recommended the inclusion of three elements into the training program.

A Risk Communication Modeling and Simulation Capability

A Web-based, modeling and simulation (M&S) capability should be developed to complement the overall training program. The modeling and simulation effort should be

scalable and consistent with existing models and simulations used by other U.S. government entities.

A Disaster and Emergency Risk Communication Seminar Program for Local Leaders

The purpose of the seminar program should be to provide local leaders a forum for sharing lessons learned. Speakers at the seminar would include local leaders who have experienced the challenges of effectively communicating during and after a natural or manmade disaster. The seminar will include discussion and analysis of case studies by risk communication experts.

An Executive Coaching Program Focused on Disaster and Emergency Risk Communication

The purpose of this program should be to identify a cadre of practitioners and researchers who are able and willing to serve as "real-time" coaches and mentors for local leaders facing an imminent crisis.

APPENDIX 3: Preliminary Findings – Bibliography and References

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