

## Protecting First Responders on the scene of a terrorist attack

Jennifer S. Holmes

Dean

Lloyd V. Berkner Professor

University of Texas at Dallas

What kind of threats?

- “threats and hazards that pose the greatest risk.”
  - the evolving terrorism threat
  - the growing risk of cyber disruptions
  - enduring hazards, such as biological challenges and nuclear terrorism;
  - natural disasters with more costly and variable consequences—

Things to ponder

- Easy targets
- Crumbling infrastructure makes an effective response logistically much more different
- In the words of Stephen Flynn, be resilient!

Each category was evaluated on the basis of capacity , condition, funding, future need, operation and maintenance, public safety and resilience.

Methodology

Aviation	D	Ports	C
Bridges	G+	Public Parks and Recreation	G-
Dams	D	Rail	G+
Drinking Water	D	Roads	D
Energy	D+	Schools	D
Hazardous Waste	D	Solid Waste	B-
Inland Waterways	D-	Transit	D
Levees	D-	Wastewater	D

Past targeting of mass transit

- Madrid 11, 2004
- Al Qaeda killed 191



London July 7, 2005



How Keep them safe?



#### From FEMA's Emergency Response to Terrorism

- The terrorist's method of attack may require a delay in response in order to be most effective. Responders may be attacked simply to delay efforts of fire suppression or rescue.
- In addition, attacks on emergency responders may instill fear in other emergency responders across the nation and are likely to increase the level of media attention the incident receives.

#### Some security issues to consider & train for

- improvised explosive device (IED) awareness training;
- secondary explosive device/booby trap awareness training;
- Of primary concern to fire and EMS responder is the possibility that the primary blast may not have detonated all of the explosive material. Unexploded materials may be lying among the debris.

#### Recognize Distraction Techniques

- Previous bombing incidents have proven that terrorists use various distraction techniques to attract attention and draw in crowds. Once the audience of onlookers and emergency responders has assembled a larger, more powerful bomb will be detonated. This delayed attack technique is commonly known as the "secondary device."
- Another deceptive tactic used is to display a countdown timer designed to give the observer a false sense of security. The bogus timer may indicate 30 minutes remaining on the display, while the device is actually programmed to explode at the 10 minute mark.

#### Rand "Protecting Emergency responders"

- At the World Trade Center on 9/11/01, 450 emergency responders perished while responding to the terrorist attacks—about one-sixth of the total number of victims.
- In response to 1995 attack on the Alfred P. Murrah Federal Building in Oklahoma City, the September 11 attacks on the World Trade Center and the Pentagon, and the anthrax incidents that occurred during autumn 2001.

#### Unique challenges of terrorist events for first responders

- large in scale, long in duration, and complex in terms of the range of hazards presented.
  - about the difficulty of conducting search and rescue, fire suppression, and shoring and stabilization operations, as well as hazard monitoring.
  - Lots of gear is not designed to be worn 40+ hours a week
  - Protection of first responders from hazards
  - Expansion of roles
- The terrorist-attack sites are also crime scenes requiring preservation and collection of evidence for investigation and prosecution.

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#### SITE MANAGEMENT

- Is there a coherent command authority?
- Regarding personal protective equipment,
  - information provision,
  - equipment logistics (do people know where it is?)
  - and enforcement.
- What are the barriers to equipment standardization or interoperability among emergency-responder organizations?

## Hazards

- The hazards encountered in responding to the terrorism incidents included fire, falling debris, explosions, burning fuel, hazardous materials, structures prone to collapse, heat stress, exhaustion, and respiratory irritants.
- additional potential threats, including secondary explosive devices and chemical, biological, and radioactive contaminants.

## community and volunteer involvement in the responses

- During the Oklahoma City, World Trade Center, and Pentagon events, many off-duty EMS, police, and fire personnel responded directly to the scenes, as did private ambulance services, doctors, and nurses.
  - without adequate PPE or radio communications, and they operated outside the direction of the incident commander
  - How manage large numbers of community volunteers, well-wishers, and onlookers—for which they had few guidelines and little practice?

## Scene control

- the need for immediate and effective perimeter or scene control.
- Eventually, it may be necessary to erect a hard perimeter—in this case, a chain-link fence—to make sure that only essential personnel, operating under the direction of the scene commander, were on-site.

## Challenges of personal protective equipment

- You need to know what you are dealing with (but this is often not the case)
- If it is too cumbersome, people won't wear it
- Is there a supply cache nearby?
- Issues of equipment interoperability
- Do you have a safety official?

## DHS 2015: First Responder Guide

- Calls for an integrated response by first responders (i.e., emergency medical services [EMS], fire, law

enforcement, and rescue personnel)—to improve survivability of victims and the safety of first responders caring for them.

- Be wary of both IEDs and active shooter incidents in an organized, complex attack (such as the Mumbai attacks in 2008) that requires both treatment and extraction of the injured from a still-hostile environment.

#### Military Lessons Learned and Civilian Adaptation

The group states that “no one should die from uncontrolled bleeding” and developed the acronym THREAT to address these situations:

- Threat suppression
- Hemorrhage control
- Rapid Extrication to safety
- Assessment by medical providers
- Transport to definitive care.

#### IEDs

1. Prevention (thwarting if possible & safe distances)
2. Mitigation (protective equipment, physical blast barriers, etc)
3. Response (what barriers to response do you expect?)

#### Outward Warning Signs of Bomb and IED's












- Any abandoned container out of place for the surroundings.
- Obvious devices containing blasting caps, timers, booster charges, etc.
- Unusual or foreign devices attached to compressed gas cylinders, flammable liquid containers, bulk storage fixtures, and other chemical containers.
- Abandoned vehicles that are not conducive to the immediate environment, gasoline tanker in front of a potential terrorist target site.
- Entrance thresholds that present wires or attached hardware that appear out of place.



- Detection of strong chemical odors for no apparent reason.

#### Large & Medium Scale Terrorist/Insurgency Attack

- Large scale IED
- Protective equipment - barrier or structural walls that may protect or reduce injuries to bystanders and responders from blast and fragmentation injuries, ballistic protective equipment, etc.
- Good communication with hospitals, etc

 <b>BOMB THREAT STAND-OFF CARD</b> 					
Threat Description		Explosives Capacity	Mandatory Evacuation Distance	Shelter-in-Place Zone	Preferred Evacuation Distance
 Pipe Bomb		5 lbs	70 ft	71-1199 ft	+1200 ft
 Suicide Bomber		20 lbs	110 ft	111-1699 ft	+1700 ft
 Briefcase/Suitcase		50 lbs	150 ft	151-1849 ft	+1850 ft
 Car		500 lbs	320 ft	321-1899 ft	+1900 ft
 SUV/Van		1,000 lbs	400 ft	401-2399 ft	+2400 ft
 Small Delivery Truck		4,000 lbs	640 ft	641-3799 ft	+3800 ft
 Container/Water Truck		10,000 lbs	860 ft	861-5099 ft	+5100 ft
 Semi-Trailer		60,000 lbs	1570 ft	1571-9299 ft	+9300 ft

#### Operational goals

- First responders should develop inter-domain (EMS, fire, and law enforcement) Tactics, Techniques, and Procedures (TTPs)
  - Better response for victims
  - More protection of first responders
  - More integration of response.
- Civilian response programs should develop joint policies, training, tactics, and communications that enhance



the interoperability of all of the emergency services team (EMS, fire, emergency management, law enforcement, and others).

- What are the obstacles to joint training?
- ...Communication?
- ... Intelligence sharing?
- How well do operations work when there is a law enforcement operation or response to terrorism and there is a medical/fire response needed?

#### APA policy guide on security

- What can city planners do to support security?
- **Crime Prevention Through Environmental Design (CPTED)** is defined as "a theory of crime prevention that places a major emphasis on the design of the physical environment as the primary focus for addressing issues of public safety. CPTED relies on three primary principles: 1) natural access control, 2) natural surveillance, and 3) territoriality. Through the use of these principles, the physical environment can be modified or designed to eliminate the opportunities for a crime to be committed."

#### But cost of doing too much security

- A hodge-podge of hasty solutions (e.g. jersey barriers, expanded perimeters, street closings, etc.) can mar the historic fabric and good design of many of our cities and towns.
- Uninformed security policies could have harmful effects such as exacerbating sprawl and unforeseen locational impacts.
- Too many barriers can limit evacuations

#### Recommendations

- Promote research on best practices for security planning for transit facilities, addressing specific physical security provisions related to stations, boarding areas, bus stops, and the surrounding public realm.
- facilitate the sharing of geospatial data, along with GIS and GPS-related technological expertise, among planners and first responders for security purposes.

## Moving ahead

- Don't forget that city planners often have access to local land use, building, and development data and technical resources that can be crucial to prevention, preparedness, response, recovery, and mitigation activities.

## Preparing for the threat? FEMA 2001 warnings (3 big possible disasters)

1 - Terrorist attack in NYC

2- Major hurricane in New Orleans

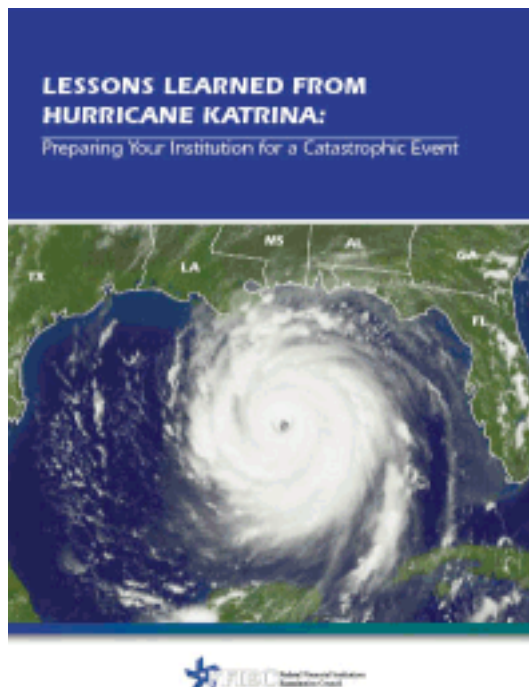
3- Big earthquake in San Francisco

## How to assess risk?

- Should resources be allocated based on risk, risk reduction, or some other basis?
- How can terrorism risk be estimated?
- What are the tolerable levels of risk?
- Asset based risk? (types of targets: chemical plants, stadiums etc)
- Geography based risk? (vulnerability factors such as international border, # of visitors, etc)

## Political Costs of Managing Risk

- Best we can do: "reduce risks of something bad occurring, to minimize costs if the worst happens, and to maximize the government's response"
- How much should citizens spend themselves?
- Is the answer redundancy & overlap?



Effectiveness of response

What would an effective national response look like?

- 1 Preparing government to assist civilians
- 2 Providing for continuity of government
- 3 Providing for continuity of military operations
- 4 Border & coastal defense
- 5 National air defense

Command and control or..

- Is a more collaborative model better?

“Command and control approaches ... are inconsistent with the shared responsibility and authority that characterizes the national emergency management system and interferes with the collaboration that is necessary to address ... hazards”

Waugh & Streib 2006 , 131

So we need good leadership

- What is it?
- Flexible, adaptive management to “encourage the sharing of information and more collaboration”
- Command and control hinders information flows from bottom up
- Interpersonal contact/ working relationships are critical

Balancing vs Ongoing Strains

- Problem today in security: Deeply embedded culture of secrecy in defense and law enforcement (What is the role of an informed citizenry i.e. United flight 93?)
- It is possible to react quickly – even without high tech equipment: Boston fire of 1872 – reinforcements from CT & ME arrived within 9 hours.
- 1906 earthquake – aid & troops from army troops before even receiving an official request for help.
- Action occurred and legal resolutions happened after it was all over.

Two crises

- Hurricane Katrina (August 2005)
- 9/11



### Katrina

- Failure at all levels (local, state, federal)
- FEMA “command and control” did not function
- Well known vulnerability but poor planning
- Little mitigation before event (levees, zoning etc)
- Larger percentage of the population was “response complicated” by distrust and poverty











#### Big 9 11 failures

- Agencies failed to share/coordinate information
- Immigration officials lost track of the hijackers
- Lack of communication between FDNY and NYPD
- No agreements for aid from neighboring FDs for FDNY



- “The September 11 attacks fell into the void between the foreign and domestic threats.”
- “In sum, the domestic agencies never mobilized in response to the threat. They did not have direction, and did not have a plan to institute ..”
- “This incident is an example of how day-to-day gaps in information sharing can emerge even when there is mutual goodwill.”
- “It is now clear that everyone involved was confused about the rules governing the sharing and use of information gathered in intelligence channels.”

Example of a success: Arlington County VA

- AA flight 77 & the Pentagon
- They had well practiced emergency plans + FBI, Fire Dept had set up command centers within minutes)
- Had aid of neighboring fire depts
- Why? Arlington had a “carefully framed emergency response plan build on an integrated command structure, mutual aid agreements with surrounding communities, a solid emergency team, an assistance program to back up employees ..., and constant drilling over many years”

- Same with health authorities

#### How to start?

- Assess possibilities and resources in your area
- Define areas where most needed
- Communicate with other governmental bodies and other possible partners
- Form a plan
- Have pre-existing mutual aid agreements/memoranda of understanding

#### Basic Issues

- Communication
  - Personal
  - Interoperability
- Failure to plan
- Poor intelligence
- Communication issues
- Who is in charge?

#### Forms of Interlocal Cooperation

- Handshake agreements
  - No formal documentation
  - Often a product of historical convenience

#### Handshake Agreement: Pros & Cons

- + Informal
- + Expedient
- + Politically palatable
- + No obligations

- Misunderstandings
- Leadership changes
- Major issues often overlooked
- No obligations
- No recourse

#### Regional Bodies: Pros & Cons

- + Excellent forum for looking at regional issues
- + Often seen as a “neutral”
- Generally little authority for action
- Often viewed as contrary to local governance

#### Intelligence Guide

- Five types of intelligence
- 1. Geospacial Intelligence (GEOINT)
- 2. Human Intelligence (HUMINT)
- 3. Measurement and Signature Intelligence (MASINT)
- 4. Open-Source Intelligence (OSINT)
- 5. Signals Intelligence (SIGINT)

#### Intelligence can provide

- Decision advantage, by presenting information and analysis that can improve the decision making process for consumers and partners while hindering that of our enemies.
- Warning of potential threats.
- Insight into key current events.
- Situational awareness.
- Long-term strategic assessments on issues of ongoing interest.