

BIOTERRORISM RESPONSES & SHIELDING

‘WHAT IS TO BE DONE’

Advisory Panel to Assess Domestic Response Capabilities
for Terrorism Involving Weapons of Mass Destruction

30 April 2003

Gregory B. Saathoff M.D.
Critical Incident Analysis Group

Terrorism has a Basis in Psychology

The function of terrorism...

...is to terrorize

“...America’s adversaries must find ways to exploit perceived US weaknesses, social, political and military.”

“Panic in and of itself, is becoming the new terrorist tool”

Biological Agents – The ultimate (threat) weapons?

- Psychologically potent
- Small quantities constitute a large threat
- Persistence
- Production uses dual-use technology
- Readily-manufactured
- Tracking & verification difficult
- Defensive postures weak or non-existent

Bioterror events

First responders & incident managers will be 'local'

Any strategy for a bioincident must begin with 'local' planning

The strategy must recognize the disconnect, temporal & functional, between 'local' and 'federal' responses

“Think Federal – But Act Local”

Disaster Response: Bioterror Event

Crisis Management Goal: Contain Contagion

In a contagious bioterror event, **behavior** of potential victims will determine the success or failure of the attack. A successful attack does not require panic, but does require mobility leading to spread of epidemic

1/3 will be 'numb' and will respond to leadership

1/3 will be 'heroic' but will require direction

1/3 will 'panic' and require significant resources

Evacuation despite Government Directive to Shelter-in-Place

- **Explosion** in at BPS chemical plant in West Helena, Arkansas, (1997) kills three firefighters, injures many others and releases toxic smoke;
- 90% followed instructions to evacuate
- **only 27% followed instructions to shelter in place** “At least 68% of those people advised to shelter chose to evacuate instead.” John Sorenson ORNL



(Courtesy WPTY)

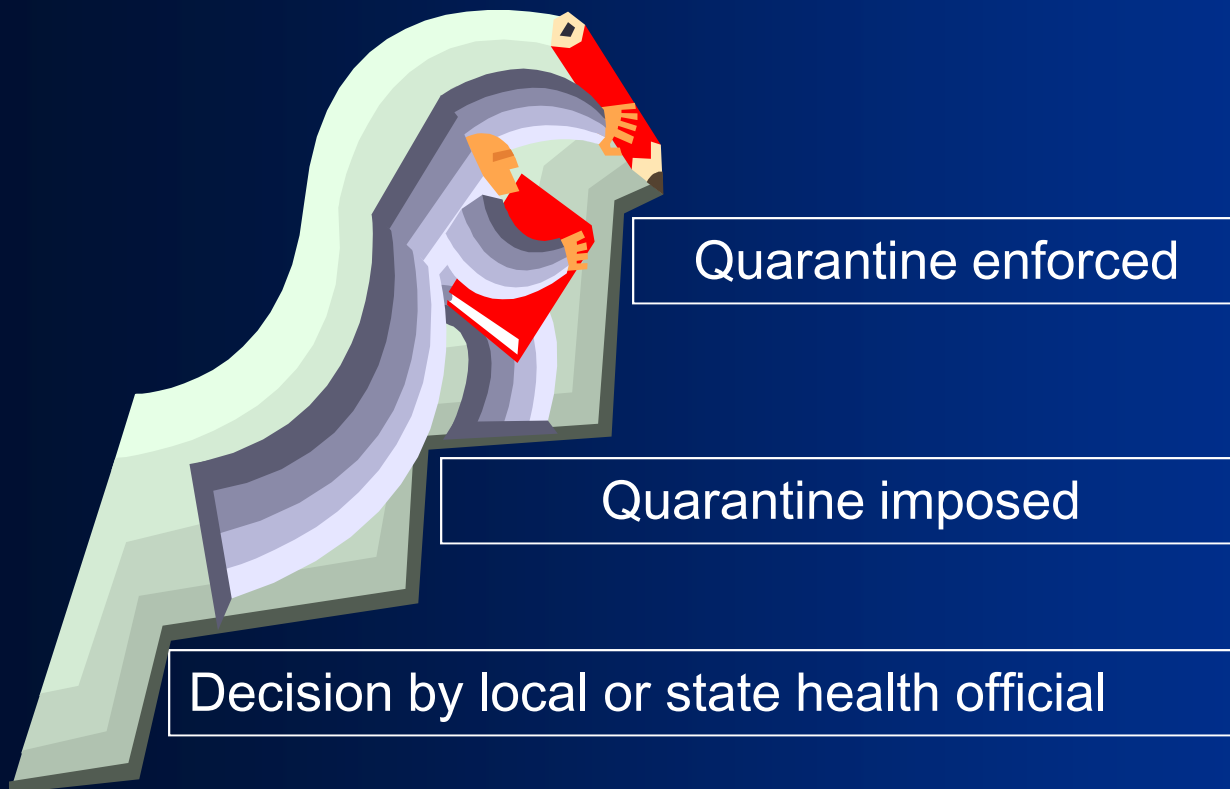
Meningitis Outbreak: Mankato MN, 1995

- Day 1: bacterial meningitis dx in student
- Day 3 >1,000 students vaccinated
- Day 8: five more people were diagnosed,
3,300 more vaccinated
death of student
5 new cases
spread of epidemic and “panic”
- Day 12: 26,000 more vaccinated

Michael Osterholm, Ph.D., M.P.H., Former MN State Epidemiologist

Quarantine – The Unwanted Solution

“Quarantine is defined as the restriction of activities or limitation of freedom of movement of those presumed exposed to a communicable disease in such a manner as to prevent effective contact with those not so exposed.” CDC 2002



Problems with “Quarantine”

- Imposed measure invoking negative responses
 - Behavior of affected population will impact outcome
- Perceived as infringing civil liberties and freedoms
 - Public perception of incident management is important
- Absent effective States law - federal intervention
 - Public will focus on federal involvement and management
 - *Ad hoc* approaches will invoke fear, panic, & anger



Evacuation

Evacuation is defined as the organized, phased, and supervised dispersal of people from dangerous or potentially dangerous areas (FEMA definition).

See also mandatory evacuation; spontaneous evacuation; voluntary evacuation.

Spontaneous Evacuation

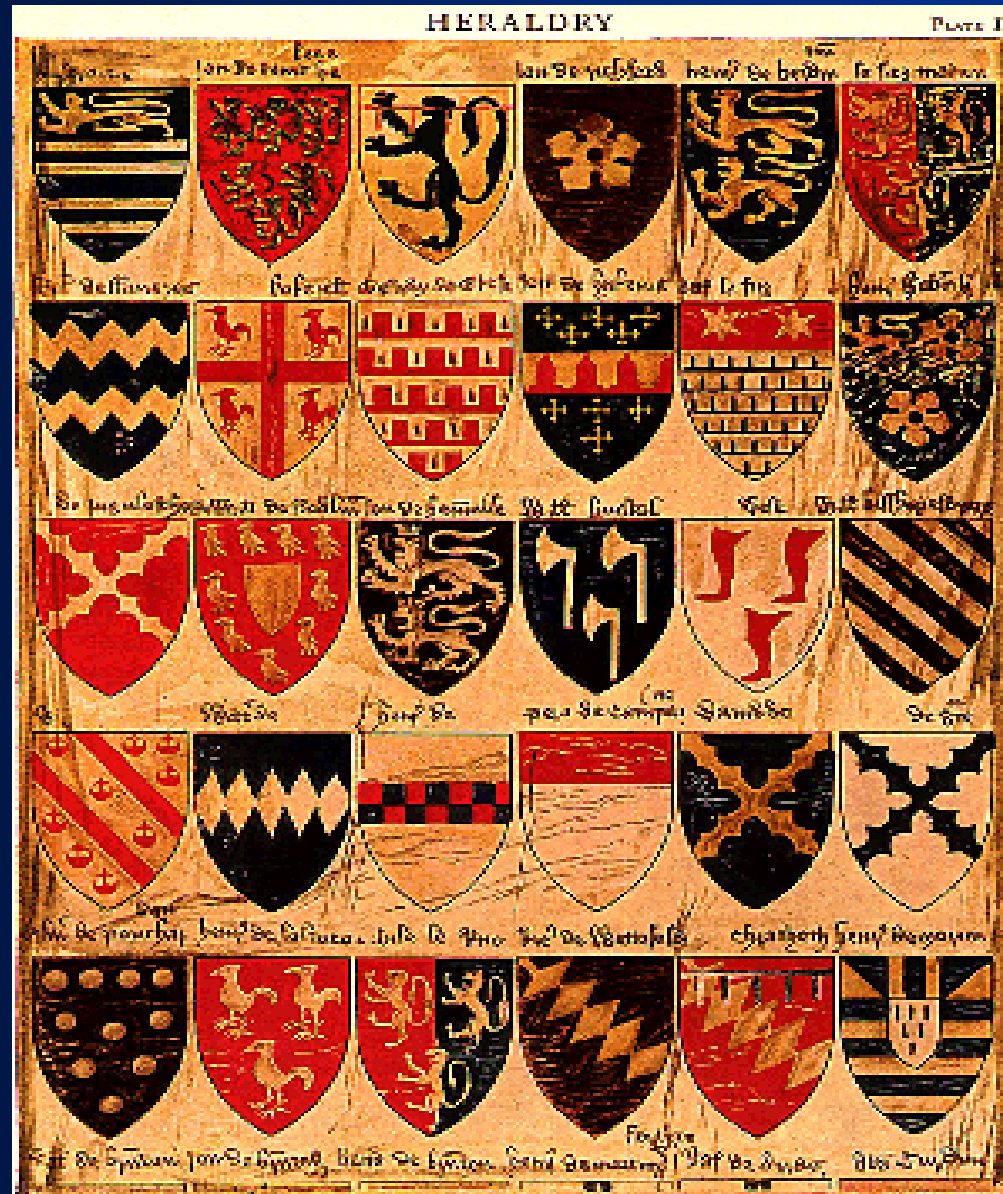
Residents. . . observe an emergency event or receive unofficial word of an **actual or perceived threat** and without receiving instructions to do so, elect to evacuate the area.

Their movement, means, and direction of travel is unorganized and unsupervised.

The Evacuation Escalator



Community Shielding and Autonomy



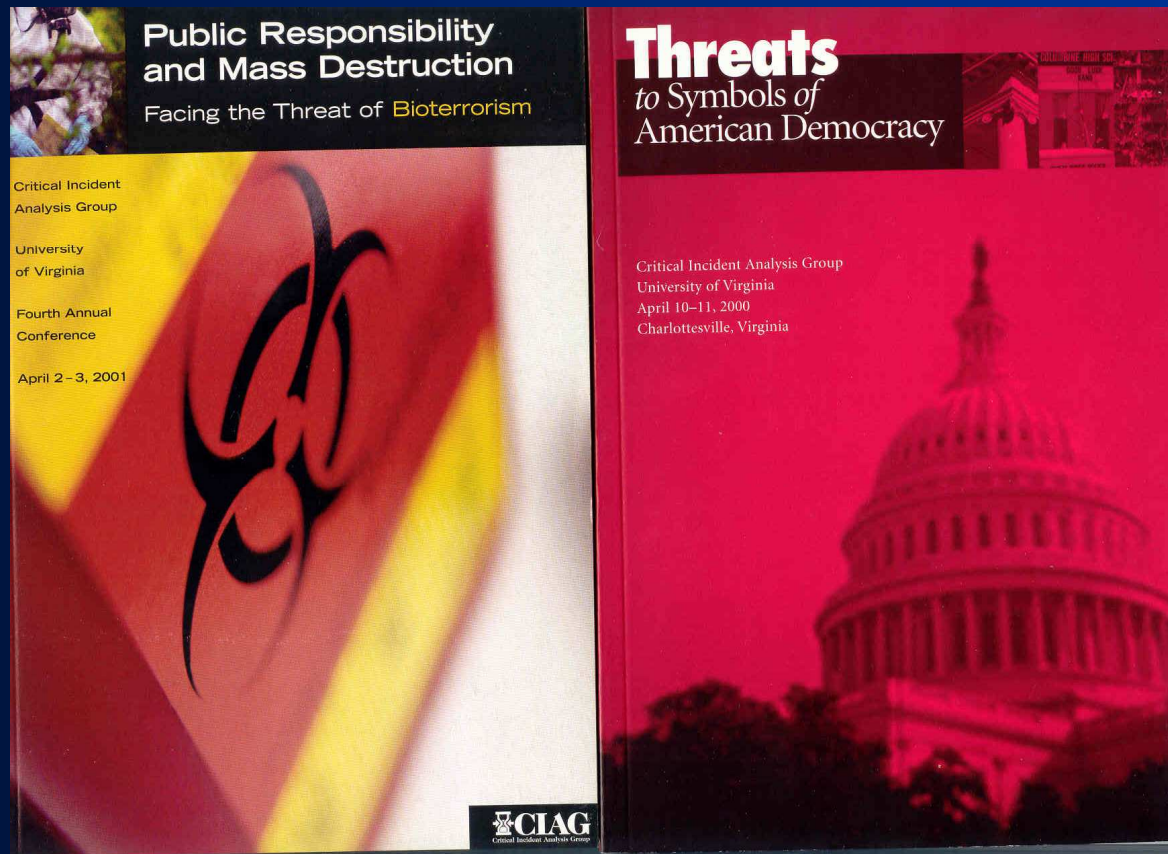
Community Shielding – Defined

A form of insulation wherein individuals and groups employ a self-imposed isolation, or quarantine, within their natural surrounding for a temporary period of time.

.....
To be successful, shielding requires a partnership of government, business, media, and the public, operating under the best scientific and medical practices to break the disease cycle and insure minimal disruption to the routine activities of the nation

Shielding, with federal leadership & support presents a positive image by enlisting the public. This maintains trust in leadership and helps insure effective incident management

CIAG Foundations of Community Shielding



Critical Incident Analysis Group (CIAG): An interdisciplinary consortium dedicated to improving crisis response to critical incidents

Quarantine vs. Community Shielding

Quarantine

- Enforced/Coercive
- Reactive
- Opaque
- 'Top-down'
- Involuntary
- Communication 'poor'
- Government imposed

Community Shielding

- Facilitated
- Proactive
- Transparent
- 'Bottom-up'
- Voluntary
- Communication 'rich'
- Government sanctioned

Spontaneous Evacuation vs. Community Shielding

- Reactive
- Increased movement
- Exacerbates crisis
- Unfamiliar environment
- Unpredictable needs
- Unstable communication
- Govt. trust not established
- Decreased options: “chute”
- increased \$
- Investigation capabilities impaired
- Urban bottleneck
- Proactive
- Decreased movement
- Stabilizes Crisis
- Familiar environment
- Predictable needs
- Stable communication
- Govt. trust established
- Preserved options
- Decreased \$
- Investigative capabilities preserved
- No urban bottleneck

Community Shielding: A Concept for the 21st Century

a proactive, voluntary concept

- ✓ is a home/community based action
- ✓ provides a 'safe, secure, comfort zone'
- ✓ uses existing resources/information technology
- ✓ The period of required shielding is 7-28 days

Community Shielding Matrix - Implementation

Status	Government	NGO's	Media	Family	Community	Business
<u>Pre-Incident</u> HSAS						
Low						
Guarded						
Elevated						
High						
Severe						
<u>Incident</u>						
Stand-Fast						
All-Clear						
Non-contagious						
Contagious						

Proposed Work on Implementation

- ✓ Create specific 'templates' for community shielding
- ✓ Develop private sector methodologies
 - ✓ Consistent with Federal, regional, state & local planning
 - ✓ Interaction with 'key stakeholders'
- ✓ Direct research into specific issues
 - ✓ Who? When? How?
 - ✓ Agent specific actions

“I know of no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them but to inform their discretion.”

