

# **Medical Community**

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**“An attack of this kind is not a question  
of ‘if’ but ‘when.’”**

**Former US Senator Sam Nunn**

# Principles and Practices

- Early rapid recognition of unusual clinical symptoms or deaths
- Rapid, clear information exchange between clinicians and Public Health organizations
- Detection of high and low frequency events
- Early recognition of outbreaks above “expected levels” of common symptoms, diseases, or deaths
- Not all epidemics are related to bioterrorism
- Do not wait for help – act now

# Reportable Diseases

24 hours reporting required:

- Diphtheria
- Measles
- Rubella
- Smallpox
- Yellow Fever
- Plague
- Human Rabies
- Botulism
- Cholera
- Salmonellosis
- Typhoid Fever
- Shigellosis
- Staphylococcus
- Streptococcus

72 hours reporting required:

- Vaccinatable Diseases
- HIV
- Enterics
- Hepatitis (B,C)
- Vector-borne
- Zoonoses
- TB
- Antibiotic Resistant

# Possible Delays to Report by Clinicians

- Lack of awareness
- Lack of WMD training in state and local health organizations
- Patient privacy
- Too long medical forms and other documents
- Reporting delays and lapses
- Lack of experience working together with federal, state and local Public Health organizations

# Multilevel Laboratory Response Network

## for Bioterrorism

**Level A:** Public Health and hospital laboratories. Early detection of biological agent (BA) with low-level biosafety facilities (use clinical data and standard microbiological tests to decide which specimens should be shipped to the next level lab)

**Level B:** State and local laboratories. Can test for specific agents, minimize false positives, and characterize drug susceptibility

**Level C:** Academic research centers, state health and federal facilities. Perform toxicity test, nuclear acid amplification, and molecular fingerprinting

**Level D:** Federal laboratories. Diagnose rare diseases, maintain a strain bank of BA, detect genetically engineered agents, and develop and evaluate new tests and methods

# Available Assistance in Medical Communities

- 750 EIS (Epidemic Intelligence Service)
- 300-350 CDC PHA (Public Health Advisors)
- 70 PHPS (Public Health Prevention Specialists)
- Epidemic and Emergency Response Coordinators

(Information from CDC Report, 2000)



# How We Can Recognize BA

- Time to recognize BA will vary depending on several factors
- The incubational period poses the biggest danger for epidemiological control
- First symptoms might be first signs of biological attack
- Private clinics and hospitals will be the first responders and possible first victims after a biological attack

# Can We Trust Hospitals?

- Unwillingness of some hospitals to accept contaminated victims
- Lack of proper training of medical staff and lack of preparedness in Emergency Rooms and other medical units, result in contamination of hospital floors within minutes or hours
- Lack of ability to properly decontaminate victims and responders
- Lack of personal protective equipment in hospitals



Positive pressure suits worn at Biosafety Level 4 allow investigators to work safely while they develop vaccines and antiviral drugs for viruses such as Ebola.

# Principles and Practices

- Hot zones after biological attack
- Hospital layouts may differ but principles are still the same
- Two possible options for local hospitals
- Isolation and security precautions for hospitals, both inside and outside

# Principles and Practices

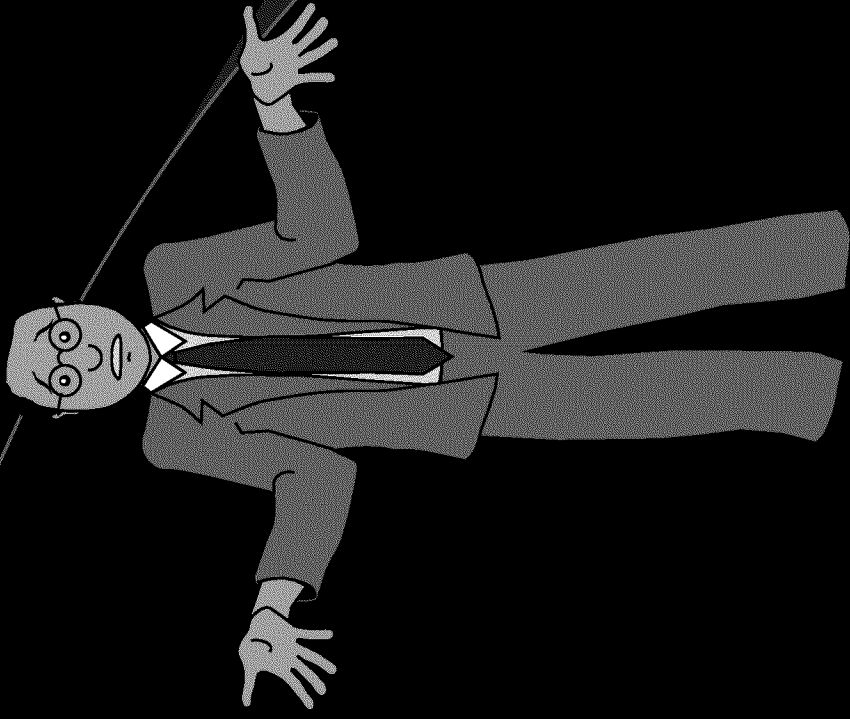
- Stockpiles in the hospitals and casualty collection area (CCA)
- On-call medical units in each hospital that are specially trained on aspects of WMD
- Hospitals that are specifically built and staffed in large cities for any infectious disease outbreaks, rather than smaller infectious disease units in local hospitals

# How We Can Isolate the City

- What resources are needed for Quarantine?
- What areas and epidemiological zones must be isolated immediately?
- What about evacuation and the potential dangers of this?
- Prophylaxis must be initiated within hours of confirmed BA delivery

# National Pharmaceutical Stockpile (NPS) Program

- For biological and chemical terrorism events
- National repository of antibiotics, chemical antidotes, antitoxins, life-support medications, IV administration, airway maintenance supplies, and surgical items
- Supplement and re-supply state or local Public Health agencies
- Push Packages: for immediate deployment to the airfield closest to the affected area within *12 hours* of the federal decision
- If need more – Vendor Management Inventory (VMI) Packages will be shipped within *24 to 36 hours*



**Questions?**