Preparing for Terror
The U.S. Perspective

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4 April 2003

Assumptions

- Need for planning for and development of greatly enhanced systems for dealing with a range of catastrophic events
  - Biological – deliberate and natural
  - Nuclear –
  - Chemical
  - Explosives
  - Major accidents (e.g. plane and train)

State and local authorities

- Speed and effectiveness of detection, diagnosis, response and recovery depend heavily on state and local resources
  - Integrated planning required involving civil authority, public health, hospital, law enforcement, voluntary agencies, others
  - Limited experience with operations of this type any where since perhaps WW II

Public Health Status as of 2000

- Public health
  - Understaffed and poorly trained
  - Communication with hospitals and legal authorities –almost nil
  - Concept of 24/7 response – unknown
  - Laboratories – limited staff and capability
  - Generally not well-respected by professional community
  - Many units without PC or FAX

Hospitals Status as of 2000

- A disparate array
  - Private and public hospitals mostly in competition with each other
  - Veterans' Administration and military hospitals operate totally independently
  - Non-government hospitals staffed primarily by private physician-entrepreneurs
- Most are financially stressed and operating at close to full capacity

Existing resources (2000) in medicine and public health

- Management of emergencies
  - Local/regional emergency management groups
  - Poison Control Centers
  - (Hazardous material teams)
- Metropolitan Medical Strike Teams
  - 1995-2000-- Depts. of Defense and Justice
- Effectively no program in Dept of Health and Human Services or academic health centers

Priorities

- "Events that could threaten the integrity of civil government"
  - Biological
  - Nuclear
  - Chemical
  - Explosives, guns
- Program goal –To ensure sustained public health and medical readiness for:
  - Bioterrorism
  - Infectious disease outbreaks
  - Other public health threats and emergencies

Organisms of greatest concern

- The "Class A" group
  - Smallpox
  - Anthrax
  - Plague
  - Tularemia
  - Botulinum Toxin
  - Hemorrhagic fevers

Strategic needs -- smallpox

- Vaccine
  - Stored calf lymph vaccine--100 mil. doses
  - New, tissue culture vaccine—206 mil. Doses
  - Vaccinia immune globulin
  - Second generation smallpox vaccines
  - Bifurcated needles
- Hospitals
  - Negative pressure rooms in all Ers
  - Negative pressure rooms for 500+ patients in each hospital region

Strategic needs --Anthrax

- Vaccine
  - Traditional vaccine--post-exposure Rx
  - Second generation vaccine, possibly for very large scale use
- Antibiotics – to treat 20 million persons for 60 days
- Ventilators

Strategic needs --others

- Vaccines
  - Development of vaccines for each of the other agents—lab use primarily
- Antitoxin
  - Botulinum toxin Rx
- Antibiotics
  - Quantities ordered primarily for anthrax would cover needs for plague and tularemia
- Ventilators
  - Those needed for anthrax could be used for Botulinum toxin poisoning

Other special provisions

- 12 emergency stockpiles able to be delivered anywhere within 12 hours
- Emergency epidemiological staff- CDC
- Special teams able to be mobilized --medical, mortuary, veterinary
- Laboratory network (100+) trained to identify 5 of the 6 Class A agents
- Comprehensive R & D program involving private sector, academia and government

Strengthening at state/local levels

- 2002 -- $1000 million disbursed
  2003 -- $1500 million to be disbursed
- Principles
  - Award to State Health Officers thro Governors
  - Allow flexibility in use of funds but build in accountability
  - 17 bench marks plus explication of wh at are identified as critical desired capacities

Partial summary of benchmarks

- Full-time Director of Program at state
- Planning and oversight committee to embrace all constituencies
- Special committee for region-wide hospital planning to accommodate 500+ patients
- Plan for distribution of antibiotics or vaccines to all in a state within 10 days
- Communications systems linking all principal components with 24/7 coverage
- Plans for risk communication and information dissemination to community

State of Preparation

- Enormous progress has been made but a great deal remains to be done
  - Tests of the system
    West Nile virus epidemic
    Corona virus epidemic
  - Special problems
    Smallpox vaccination
    State of economy and state/local funds
    Personnel shortages
    Bureaucracy !

Unexpected Vaccine Complications

- Myocarditis –12 cases in Military
  350,000 vaccinations (2/3 primary)
  - Onset – 7 to 12 days post-vaccination
  - 21-33 year olds, unvaccinated
  - Fever, chest pain, ST abnormalities, cardiac enzyme abnormalities
  - Mild illness,recovery- 4 to 5 days
  - One case with congestive failure

Adverse events --civilian

- Vaccinated to date –about 28,000
- Angina – 2 cases (5 and 17 days)
  - One with history of angina
- Myocardial infarction
  - Ages 55, 57, 54, 69
  - All with risk factors--hypertension, high cholesterol, etc.
  - Intervals (2, 5, 9, 17 days)

- Need longer term view – not a year or two.
- Educational – lack public epi / mil. dis. | didn't realize magnitude
- Major problem – entrepreneurs. – ill. funded ideas
  Containing flood tide of salesman
  Planning –
  Sensor devices
  BIOSENSE
  HAND HELD SIMPLE DEVICES
  SCENARIOS
  SURVEILLANCE SYSTEMS –
  Syndromic Surveillance / data mining
  DR MOSTAG HOPE
  ARRAY of possible drugs and protocols / medic
  CIDOFOVIR
- Potential for waste is enormous / potential for good is even greater.