Terrorism Preparedness and Response
National Defense Industrial Association

Hospital and Healthcare Systems

Surge Capacity

Donna Barbisch, CRNA, MPH, DHA
Global Deterrence Alternatives
Barbisch@earthlink.net

June 3, 2003

Critical need for healthcare expansion capability

- **Immediate need**
  - Capability to provide xx% expansion if an event occurs today
- **Long-term need for synchronized and sustainable regional application**
  - Requires solutions designed to work in future years

(These could be entirely different solutions)

Today’s hospital “system” is analogous to independent fire stations that do not have agreements with others for multiple alarm fires

- **No broad incident command structure**
  - **The Hospital Emergency Incident Command System (HEICS) is a good start for facilities, but it is internal to the facility**
- **No unified command**

No universal organized process exists to connect the disparate elements of the healthcare system to emergency management

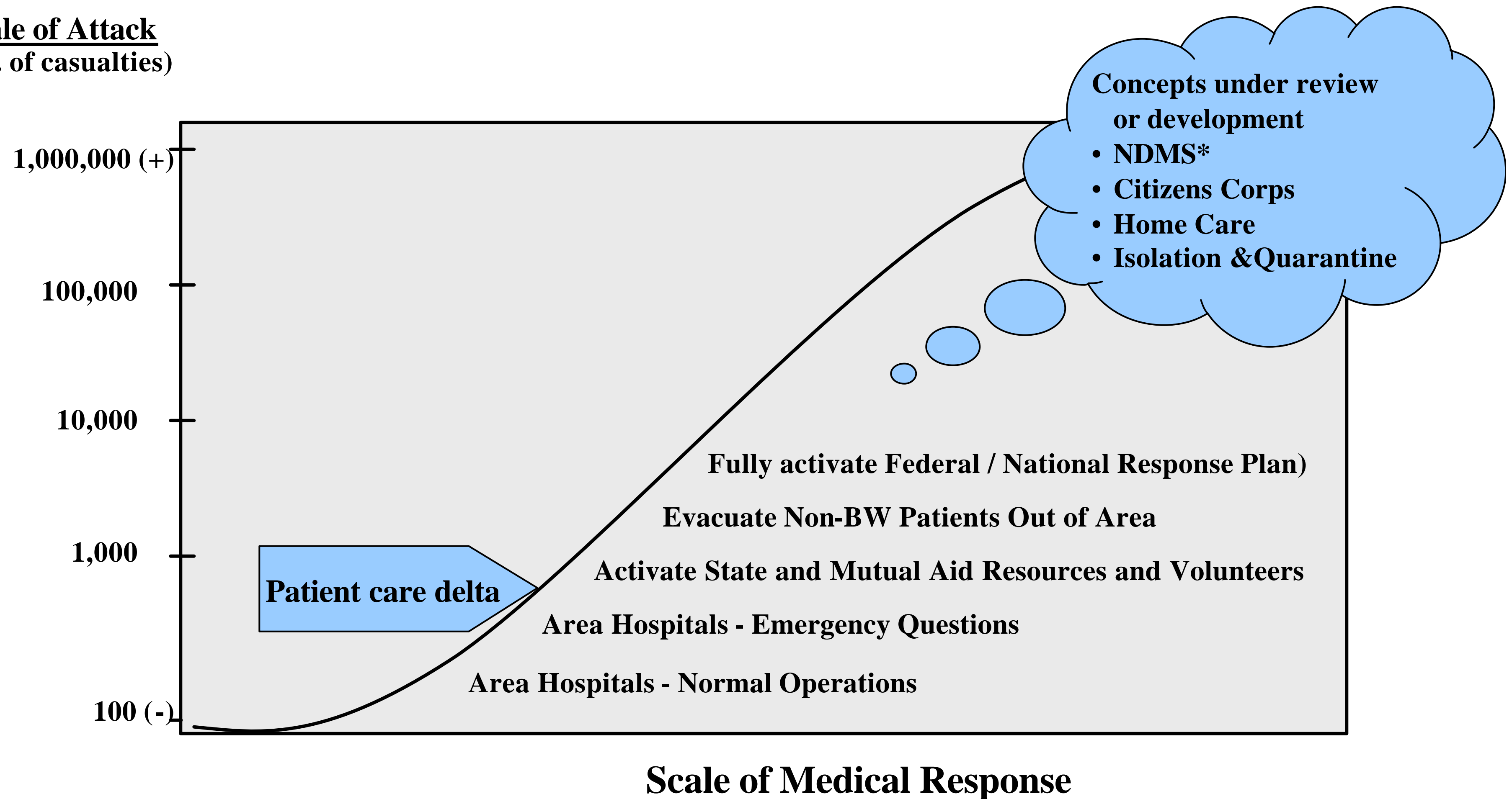
Surge Capacity

Surge capacity* – the ability to expand care capabilities in response to prolonged demand

> "**Surge capacity** encompasses potential patient beds; available space in which patients may be triaged, managed, vaccinated, decontaminated, or simply located; available personnel of all types; necessary medications, supplies and equipment; and even the legal capacity to deliver health care under situations which exceed authorized capacity."

* Health Care at the Crossroads: Strategies for Creating and Sustaining Community-wide Emergency Preparedness Strategies. JCAHO 2003

Flexible Medical Response to BW Terrorism



*NDMS: National Disaster Medical System

Surge Capacity

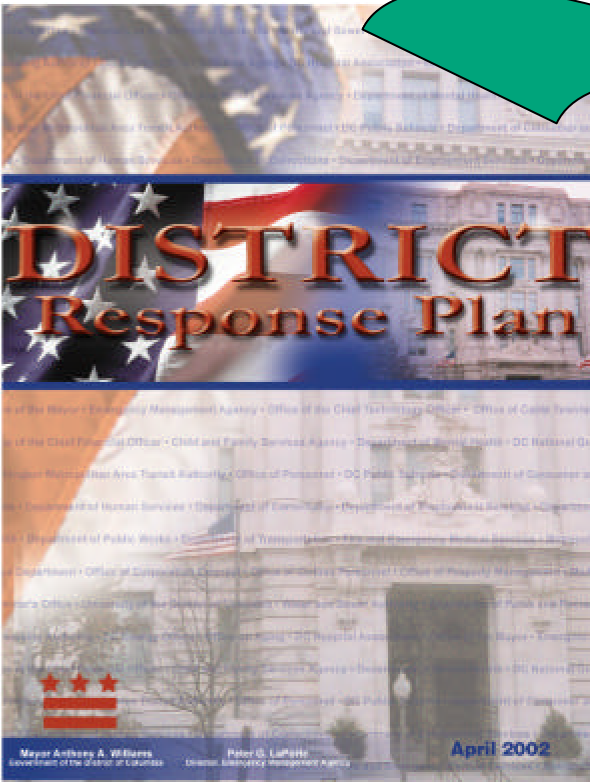
Additional Requirements in "Healthcare":

- Broad Incident Management Structure
- Communication Systems
- Non-hospital care
  - Physician and clinic capability
  - Home health
  - Hospice
- Preventive Medicine
- Laboratory
- Stress Management
- Mortuary Affairs
- Veterinary
- Transportation

Options

Expand through a planned "Degradation of Care"

- Develop protocols addressing emergency standard of care procedures
- Add beds to existing facilities
- Convert existing buildings to temporary hospitals
- Build temporary facilities
- Mobile facilities- expand in place or deploy to incident site



Regional Synchronization

The Path

District wide:

- ***Define Requirements***
- ***Assess Capabilities and Capacity***
- ***Identify priorities***
- ***Implement programs***

"We cannot guarantee that a bioterrorist act will never be committed against …but we can be sure that anyone contemplating such an attack will know we are prepared to meet it. That we have the infrastructure in place to quickly and effectively turn back the threat of an epidemic, plague or any other kind of biomedical disaster any would-be terrorist would throw at us.

Tommy Thompson, Secretary, US Department of Health and Human Services, 11 July 2002

Region/Nation wide:

- ***Synchronize plans***
- ***Identify gaps***
- ***Collaborative solutions***

DC Concept

- Provide regionally deployable immediate surge capacity to the region
- Utilize incident management system to synchronize existing healthcare resources with unified command and traditional emergency management
- Establish maintenance and logistics support agreements with federal partners located in region
- Optimize personnel support options through contingency contracting and volunteer corps
- Initiate mission area analysis to provide strategy to task framework with defined objectives and measurable outcomes
- Develop immediate and long term capabilities *

May look very different

Synchronization

- Provides complimentary expansion to existing hospital and emergency management structure
- Connects with existing local plans:
  - Emergency Management Casualty Collection Points
  - Hospital alternate sites (JCAHO requirement)
  - Ambulatory Care Centers (ACC)
  - Neighborhood Emergency Health Centers (NEHC)
  - Metropolitan Medical Response System (MMRS)
- Designed to fill gaps between existing care and federal support programs:
  - National Disaster Medical System (NDMS)
  - Strategic National Stockpile (SNS – formerly NPS)
  - Federal support to National Capitol Region (NCR)

Medical Incident Management

- Locally owned and managed (DC Department of Health)
- Utilize Incident Command Principles
- Contractor support personnel management
- Unified command operational concepts
  - Engages hospitals and other healthcare assets
  - Local, state, and federal partnerships
  - Deployability: supported by regional assets
  - Local incident commander (DC, VA, or MD) has oversight over all assets when deployed to the area

Training and Deployment Support

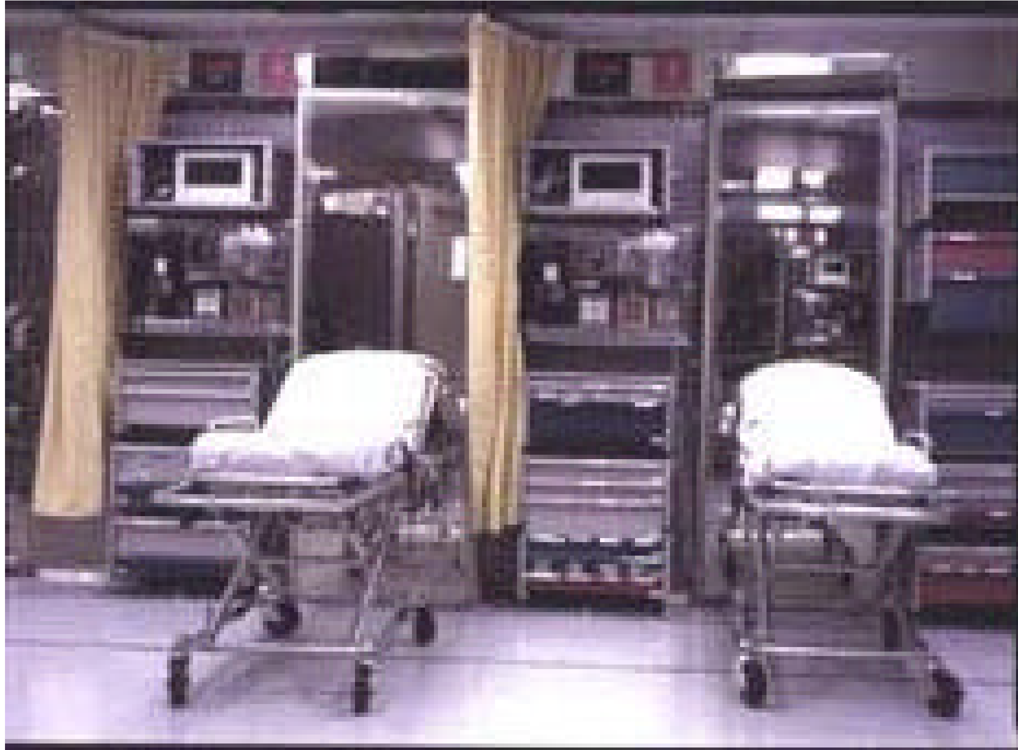
- **Staff modular site for training support**
  - **Provides training synchronization field site**

- **Dual mission training staff as advisory and coordination staff to medical incident commander**
  - **Provides operational support to incident commander**

Modular Readiness

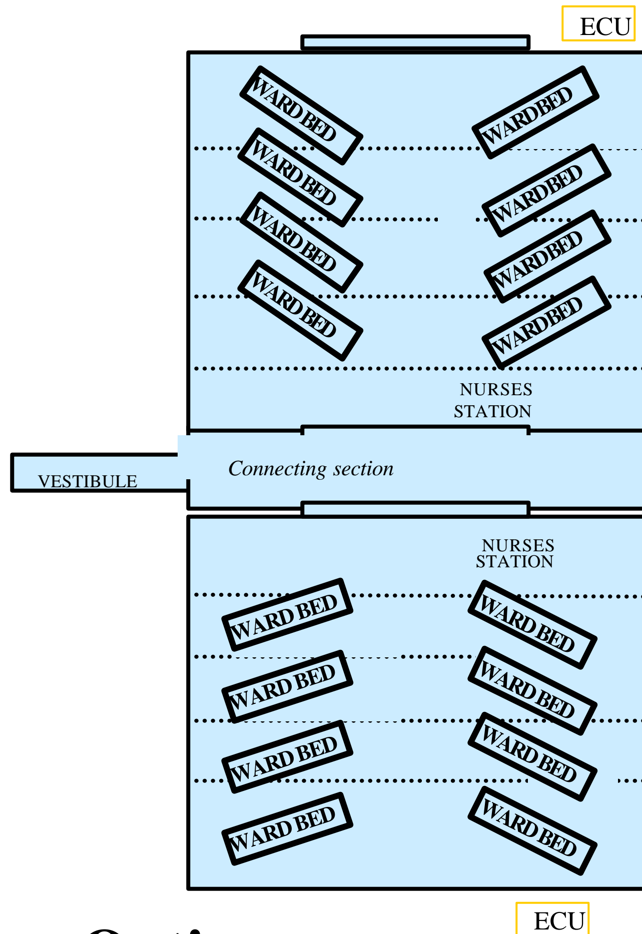
- **Deployable Hard shell**
  - **Configured for up to 8 emergency medical critical care patients**
- **Two soft shell modules**
  - **Configured for 16 critical or 20 minimal care patient each (32-40 total)**
- **Equipment and supplies for 72 hours - continuous operation**
- **Mobile - expand in place or deploy to incident site**
- **Connects to pre-planned patient care sites**

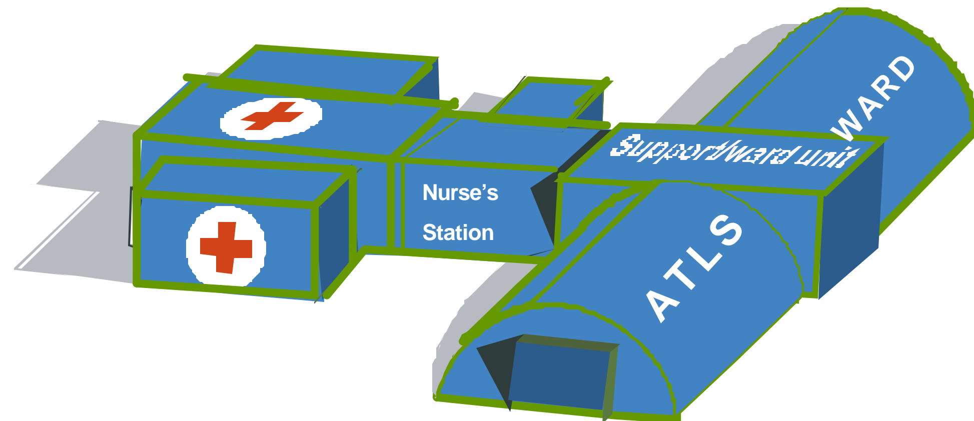
Hard Shell Module



- Rapid set-up (less than 1 hour)
- 8 patient critical care capability
- Meets JCAHO standards, ready to plug in
- Integrated patient monitoring
- Patient care console includes telephone, fax/modem port, data port, medical gas, call button and electrical outlets.

Soft Shell Module





Options:

- **Critical Care Modules**
- **Holding Modules**
- **Triage Modules**

Time Phased Modular Expansion

Kansas: Influenza pandemic 1918 Courtesy of PBS

Mobility supports connection/synchronization with existing structure or plans:

- **Fixed facility patient holding (i.e. gymnasium/armory/etc.)**
- **Acute Care Center concept**
- **Casualty collection points**
- **Goal: 1000+ patient capability**

Personnel Support

- Use contingency contracting model for contractor support
- Synchronize healthcare facility personnel planning with non healthcare facility medical personnel capability
- Site management personnel provide training and response support
- Outreach to Medical Reserve Corps

Mission Area Analysis

- Addresses long term goals to refine concept
- Strategy to Task Framework
- Fast-Track Execution
- Stakeholder planning groups will refine concept
- Define best practice options and relevant, cost effective solutions
- Develop implementation benchmarks
- Test and exercise
- Measured results

Outcome

- Enhance National Capitol Region patient care capacity with the ability to expand care in response to prolonged demand
- Systematic expansion with immediate and staged capacity for comprehensive triage, treatment, and overall patient care
- Isolation and containment of contaminated and contagious victims
- A template for the Nation

Life is full of wonderful opportunities temporarily disguised as overwhelmingly irresolvable problems

Back up slides

DoD Active Force Medical Strength

	Army	Air Force	Navy	Civilian	TOTALS	Grand Totals
Officers						
Nurses	3250	3714	3145	5299	8444	*15408*
Doctors	4184	3691	4096	614	4710	*12585*
Veterinarian	403	0	0	14	14	*417*
Med Service	3829	1071	2655	xx	2655	*7555*
Officer Total	*11666*	*8476*	*9896*	*5927*	*15823*	*35965*
Enlisted						
Medics	29329	19338	21688	xx	21688	*70355*
	40995	*27814*	*31584*	*5927*	*37511*	*106320*

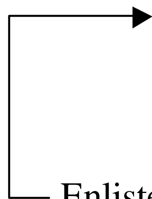
Enlisted Medics include all medical specialties

Drilling Reserves = Individual Mobilization Augmentees (IMA) + Troop Program Unit (TPU) Soldiers

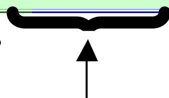
FY 01 OASD Health Affair Health Manpower Personnel Data System

Total Reserve Force Medical Strength

	Army Reserve	Army Guard	Air Reserve	Air Guard	Navy Reserve	TOTALS	Grand Totals
Officers							
Nurses	9483	773	5034	834	3280	9148	*19404*
Doctors	3104	600	2275	440	2537	5252	*8956*
Veterinarian	294	16	0	0	0	0	*310*
Med Service	4408	969	877	312	1131	2320	*7697*
Officer Total	*17289*	*2358*	*8186*	*1586*	*6948*	*16720*	*36367*
Enlisted							
SELRES	19110	15477	6574	4192	6183	16949	*51536*
Ready Reserve	11040	260	3725	0	4092	7817	*19117*
	36399	*17835*	*14760*	*5778*	*13131*	*33669*	*107020*



Enlisted Medics include all medical specialties



Drilling Reserves = Individual Mobilization Augmentees (IMA) + Troop Program Unit (TPU) Soldiers

FY 01 OASD Health Affair Health Manpower Personnel Data System