Natural Disasters in Arkansas: Public Health Preparedness, Response, & Community Resilience

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Natural Disasters

• Any major adverse event that is a result of a naturally occurring process of the Earth
Natural Disasters

- Floods, tornadoes, winter weather, earthquakes, droughts, tsunami’s, hurricanes, emergent diseases, etc.
Impact

- Loss of life / injury
- Damage / destruction of property & infrastructure
- Economic / Social impact

- Impact is a function of RESILIENCE, VULNERABILITY, and ACCESS
Catastrophic Disasters

- Any natural or man-made disaster with impacts that are greatly amplified due to:
  - Lack of resilience
  - Enhanced vulnerability
  - Diminished or removed infrastructure
  - Extraordinary events (extreme impact / low probability-frequency)
What is Preparedness?

• Is it tangible?
• Is it funding?
• What does it look like?
• What does a lack of preparedness look like?
• How do we attain it?
• How can we improve it?
• Who is responsible for it?
Preparedness is:

• *Action taken to increase resilience.*
• In order for action to be taken, a cycle of activities MUST occur.
The three primary processes in the Preparedness Cycle are:
- Planning Process
- Training Process
- Exercise & Evaluation Process

These processes actively occur in Arkansas at the State and Local level across multiple disciplines.
Planning Focus

- All Hazard Response
  - Naturally Occurring Disease Outbreaks
  - Natural Disasters
  - Catastrophic Disasters
  - CBRNE Threats
    - Chemical
    - Biological
    - Radiological
    - Nuclear
    - Explosive
Planning Efforts

- Emergency Support Function 8 (ESF8)
  - Coordinated State level Health & Medical All-Hazards Response
  - ADH is the Lead Coordinating Agency for State Response to Biological & Radiological Incidents
  - Comprises the whole Health & Medical Infrastructure

- Pandemic Influenza Response

- Emerging Diseases / Outbreaks

- Strategic National Stockpile (SNS)

- Continuity of Operations

- Critical Infrastructure
Partnerships

Planning is accomplished through collaboration with:

- Federal / State / Local Government
- Medical Community
- Private Entities
- Community Partners
- Individuals (the key)
Why Plan?

In preparing for battle I have always found that plans are useless, but planning is indispensable.

Dwight D. Eisenhower

PLANS ARE NOTHING. PLANNING IS EVERYTHING.

- DWIGHT D EISENHOWER

IF "Plan A" Didn't Work. The alphabet has 25 more letters! Stay Cool.
Strategic National Stockpile (SNS): What is it?

- Large quantities of medicine and medical supplies to protect the American public if there is a public health emergency severe enough to cause local supplies to run out.
- Once Federal and Local authorities agree that the SNS is needed, medicines and supplies will be delivered to any state in the U.S. within 12 hours.
- Focus is on Health & Medical Consequence Management of a Biological Weapons release or other CBRNE attack.
Strategic National Stockpile (SNS): What is it?

**Pharmaceuticals**
- Antibiotics (Oral and Intravenous)
- Chemical Agent Antidotes
- Vaccines
- Antivirals
- Antitoxins
- Other Emergency Medications

**Medical Supplies**
- IV Administration Supplies
- Airway Management Supplies: (Pediatric and Adult)
- Items for Radiation, Burns and Blast
- Wound Care Supplies
- Basic Personal Protective Equipment (PPE)
SNS Components

- 12 Hour Push Pack
- Highly Infectious Disease (HID) Push Pack
- Federal Medical Station (FMS)
- Managed Inventory
- CHEMPACK (pre-positioned nerve agent antidote)
# 12 Hour Push Pack

<table>
<thead>
<tr>
<th>Most talked about part of the SNS Program</th>
<th>Biological / Radiological / Chemical Terrorism Response</th>
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</thead>
<tbody>
<tr>
<td>Push Pack only represents 3% of CDC Capability</td>
<td>Acute Impact / Catastrophic Disaster</td>
</tr>
<tr>
<td>Planning &amp; Logistics Heavy</td>
<td>Weighs over 50 tons</td>
</tr>
<tr>
<td>• Receiving</td>
<td>Fits in a wide-body, cargo aircraft, or 8, 53 foot long Semi Trailers</td>
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<tr>
<td>• Warehousing</td>
<td>A maximum of 130 containers</td>
</tr>
<tr>
<td>• Security</td>
<td>Needs 12-15,000 sq. ft. floor space, absolute minimum</td>
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<tr>
<td>• Distribution Network</td>
<td>Contains &lt; 400K 10-day antibiotic regimens</td>
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<tr>
<td>Pre-positioned around the US to ensure 12 hour deployment timeline</td>
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12 Hour Push Pack

- Oral Antibiotics and Supplies
  Containers 1 - 38

- Intravenous Drugs and Supplies
  Containers 39 - 101

- Airway Supplies
  Containers 105 - 119

- Pediatric Supplies
  Containers 120 - 128

- Medical/Surgical Supplies
  Container 130
HID Push Pack

- Ebola / Viral Hemorrhagic Fever (VHF) focused.
- Targeted to designated Assessment & Treatment Hospitals within the US.
- 12 pre-positioned packs in US.
Federal Medical Station (FMS)

- Formulary and components developed and managed by HHS-Assistant Secretaries Office for Preparedness & Response (ASPR)
- Deployment packages attached to SNS program (CDC-Division of SNS)
- Part of a larger ASPR / National Disaster Medical System (NDMS) response
  - FMS augments Medical special needs / low acuity bed space / quarantine support
- NOT a “Field Hospital”
Federal Medical Station (FMS)

- Scalable size up to 250 bed unit (50 bed increments)
- Adaptable to ANY footprint (250 beds = 40,000 sq. ft.)
- Footprint may include multiple buildings and/or floors
- LOOK AROUND. YOU’RE IN ONE!
SNS Managed Inventory

• Managed Inventory (MI) (97% of DSNS’s Capability)
  • Vaccines
  • Buying Power / Surge Capacity
  • Medical and Non Medical Countermeasures

• Ongoing medical response (EMS, Hospital, Public Health)

• Catastrophic disaster medical supply line
CHEMPACK

- Pre-positioned nerve agent antidote
  - Atropine + 2PAM Chloride
- 17 Hospital Sites Statewide
- 13 “Hospital Kits” for mass exposure treatment
- 4 “EMS” Kits for immediate response
  - Mark II & DuoDote Auto-injectors
- Secured & temperature controlled
- Sensa-Phone Monitoring System
ADH Capabilities & Support Inventory

- Personal Protective Equipment (PPE)
  - Standard Precautions / Blood Borne Pathogens
- Vaccination & Dispensing Clinic Supplies
- **Antivirals**
- Pre-Deployed Chemical Agent Antidotes (CHEMPACK)
- Fatality Management Materiel Support
- Protective Action / Treatment Recommendation Support

- Established Statewide Logistics Network
- Radiological Response: Population Monitoring / Reception Center commodities
- 24/7 x 365 Emergency Communications Center: We Never Sleep
- ADH Emergency Operations Center: Statewide ESF8 Coordination
- Access to Federal Stockpiles (SNS)
How to Request Support

Requests for support in a disaster should be tiered.

- This will reflect the scope / severity of impact
  - Tier 1: Local Supply Lines (normal operations)
  - Tier 2: Regional and/or Mutual Aid Support
  - Tier 3: Request from State / Federal
Requests for Disaster Health & Medical support:

- Integrated into the ADH Emergency Operations Center (EOC) and State Emergency Operations Center (SEOC)
  - ESF8 / EM Liaison Officer
  - Subject Matter Experts – Technical Support / Guidance

- ADH will fill materiael requests via multiple pathways:
  - State Contract
  - Emergency Purchasing
  - Coordination with ESF7 (Finance) at State EOC
  - Emergency Management Assistance Compact (EMAC)
  - Federal Request to CDC for SNS Managed Inventory
  - Federal Request process (Stafford)
Mass Dispensing / Vaccination

- Mass Flu Vaccination campaigns have been ongoing in Arkansas for years. Minimum of 1 Point Of Dispensing (POD) per County.
- ADH uses these operations to analyze throughput capacity in a potential BT event.
- RealOpt Simulation Software also utilized to determine throughput targets and staffing / logistical needs.
• Local, State, and Federal government disaster responder and recovery capabilities are and will never be ENOUGH.

• Individual / family resilience is the most important factor to preparedness at all levels.

• Individual investment of time, money, and partnership is REQUIRED.

• No entity can be prepared for YOU; we can only try to help fill in the gaps AFTER the impact.
Obstacles to Preparedness

• “Can’t happen to us…”
• “We are already prepared!”
• “We don’t have the time or money for all this!”
• “We can take care of ourselves, we don’t need their help.”
Preparedness Resources

- Local First Responders
- County Offices of Emergency Management
- Local Health Units
- Regional Healthcare Coalitions
- State Agency Preparedness Branches:
  - ADEM & ADH
- Federal Partners:
  - FEMA, Homeland Security, HHS-ASPR, CDC
ADH EMERGENCY COMMUNICATIONS CENTER (ECC) 24/7 x 365

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