Emerging Infectious Diseases
Preparedness and Response

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Objectives

• National directives and Emerging Infectious Diseases
• All-hazard preparedness and response
• Louisiana’s framework
  – Partnerships
  – Communicate, Collaborate and Coordinate
  – Planning
• Ebola preparedness with response scenarios
• Conclusions
Emerging Infectious Diseases

- Diseases with an increased incidence in humans in past two decades or threat of increase in the near future
- Societal, technological, and environmental factors
  - Newly identified species or strains (e.g. SARS, MERS, AIDS)
  - Evolved from a known infection (e.g. influenza)
  - Spread to a new population or area (e.g. West Nile virus)
  - Undergoing ecologic transformation (e.g. Lyme disease)
  - Reemerging infections (e.g. drug resistant tuberculosis)
National Preparedness

• Guidance for public health and behavioral health
• Guidance for healthcare systems and providers
• Addresses various biological agents
• High-priority agents include organisms that pose a risk:
  – easily disseminated or transmitted from person to person
  – result in high mortality rates
  – potential for major public health impact
  – might cause public panic and social disruption
  – require special action for response
Three categories of pathogens: A, B and C

Category A
- Anthrax/Bacillus anthracis
- Botulism/Clostridium botulinum toxin
- Plague/Yersinia pestis
- Smallpox/variola major
- Tularemia/Francisella tularensis
- Viral hemorrhagic fevers:
  - filoviruses e.g., Ebola, Marburg
  - arenaviruses Lassa, Machupo
All-Hazard Preparedness

• Requires attention for specific types of hazards
• Steps that increase preparedness for any type of hazard
• Continuous cycle of assessment, planning, organizing, equipping, training, exercise or real-world response, evaluating with improvement planning
• Build a culture of preparedness
Preparedness Capabilities

- Community and Healthcare System Preparedness
- Community and Healthcare System Recovery
- Emergency Operations Coordination
- Emergency Public Information and Warning
- Fatality Management
- Information Sharing
- Mass care

- Medical Countermeasure Dispensing
- Medical Materiel Management and Distribution
- Medical Surge
- Non-Pharmaceutical Interventions
- Public Health Laboratory Testing
- Public Health Surveillance and Epidemiological Investigations
- Responder Safety and Health
- Volunteer Management
Features of Disaster

- Familiarity with the event
- Avoidability of the event
- Suddenness of its onset
- Intensity of its impact
- Course and duration
- Degree to which it can be controlled

http://www.bt.cdc.gov/mentalhealth/primer.asp
Response

• FEMA: “Initial First Response to a disaster is the job of local government's emergency services with help from nearby municipalities, the state and volunteer agencies.”
  – Local government responds
  – State responds
  – Damage assessments
  – Disaster declarations
  – Approval or denial requests
Structure

• International, national, state, regional, parish and community level

• NIMS core concepts and organizational processes of ICS to allow diverse disciplines from all levels of government and the private sector to work together in response to domestic hazards

• Communication, coordination and collaboration within and between levels

• Framework for response in Louisiana with networks and coalitions
Framework for Partnership

• Networks and Partners
  – Capacity: ability to evaluate and markedly increased volume for incidents that exceeds or challenges normal operations
  – Capability: ability to manage unusual or very specialized incidents

• Expertise to risk identification

• Planning with resource identification

• Shared experiences
Louisiana Response Partners

• Rapidly connect and coordinate response during an emergency
• Connections between facilities, parishes, regions and the State
• Organizational, group and individual relationships
• Routine and emergency communication mechanisms
Framework for Communication

• Communication process and systems for information exchange
  – Discussion
  – Understanding

• Collaboration creates a shared vision and joint strategies

• Cooperation helps individuals and organizations to achieve goals
Louisiana Communication

- Effective, open system
- Responsive organizations
- Sharing of best practices
- Based on experience
- Scientific basis
Framework for Planning

• Process for coordination of planning
• Planning with public, private partners
• Written plans
• Clarification of roles and responsibilities
• Identification of resources
• Processes for effective and efficient use of resources
Louisiana Planning

- Risk assessments
- Give threats and hazards context
- Include behavioral health
- Refine planning in a unified and collaborative manner
Ebola Preparedness

• International coordination and outbreak control
• Travel notices
• Information sharing
• Planning and processes
• Resource identification
  – Staff and supplies
• Workforce development with training
• Practice, exercises with improvement planning
• Surveillance
• Screening for early identification
Ebola Response

• Infection control practices
  – Isolation
  – Personal Protective Equipment
• Alert the system
• Diagnosis and treatment
• Public health response
  – Active monitoring
  – Contact tracing
Ebola and Human Remains

• Only personnel trained in handling infected human remains, and wearing PPE, should touch, or move, any Ebola-infected remains
• Handling of human remains should be kept to a minimum
• Do not open the body bags
• Avoid autopsies
• No embalming
• Remains should be cremated or buried promptly in a hermetically sealed casket
Unprepared Scenario

- Private industry worker returns
- Negative communication and no monitoring
- Uncoordinated response
  - Advanced illness: delirium, erratic behavior, flailing and staggering
  - Law enforcement engagement
  - EMS personnel at risk of infection
  - Emergency department and hospital
  - Public health response
  - Results in mistrust of systems
Prepared Scenario

- Humanitarian aid healthcare worker returns
- Active monitoring with positive communication
- Early recognition
- Coordinated response
  - Public health
  - 911
  - EMS
  - Law enforcement
  - Emergency department and hospital
  - Increased trust of systems
Ebola and Stigma

- Stigma involves stereotyping and discriminating against an identifiable group of people, a product, an animal, a place, or a nation.
- Stigma can occur when people associate an infectious disease, such as Ebola, with a population – not everyone in that population or from that region is specifically at risk for the disease.
- Ebola is caused by a virus.
References

- http://www.bt.cdc.gov/
- http://www.cdc.gov/vhf/ebola/
- http://www.fema.gov/
Conclusions

• Scientific principles to inform decisions
• Recognize Ebola preparedness and response is an evolving situation
• Participate in Networks and Coalitions
  – Clarify roles and responsibilities
  – Identify resources
• Coordinate, communicate and collaborate
• Plan, practice and improve
• Louisiana has a strong framework for response to an Emerging Infectious Disease