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Biopreparedness, Response, and Recovery: Local Challenges Alex Isakov, MD, MPH





















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Biopreparedness Response

- Objectives:
 - Protection of the health and well-being of the community
 - -Workforce protection
 - -Continuity of essential functions



Biopreparedness Response

- Best available evidence
- Best possible decision support
- Best possible communications
- Agility and Adaptability



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Operating in a biothreat environment

- Education
- Training
- Policies
- Procedures
- Equipment
- Competencies
- CONOPS



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Hierarchy of controls

Development and implementation of: environmental controls administrative policies work practices safety equipment to prevent transmission of biological agents to workers, other persons and the environment











NATIONAL BIODEFENSE STRATEGY

- The mission: save lives, reduce suffering, protect property and the environment, control the spread of disease, and support community efforts to overcome the physical, emotional, environmental, and economic impacts.
- Success is contingent upon the coordination with and the success of the community response.
- ...Enhancing the national biodefense enterprise...



ENABLE RISK AWARENESS TO INFORM DECISION-MAKING ACROSS THE BIODEFENSE ENTERPRISE.

- Provide strategic warning for, and assess the potential impacts of, diseases with the potential to affect U.S.
- Assess the potential impacts of bioincidents on critical infrastructure and supply chains, and how disruption of these systems might affect the ability to respond to bioincidents.
- Create biosurveillance and situational awareness reports tailored to inform decision-makers, the public...
- Enhance capability to characterize bioincidents rapidly with respect to biohazards involved, populations and areas affected, and consequences



GOAL 2:

ENSURE BIODEFENSE ENTERPRISE CAPABILITIES TO PREVENT BIOINCIDENTS.

- Improve capabilities and protocols for screening, isolation, and quarantine...to reduce disease spread
- Promote incident management systems capable of activating an emergency operations system in response to public health emergencies
- Promote national laboratory systems capable of timely receipt and testing of biological specimens from all jurisdictions in a country



GOAL 2:

ENSURE BIODEFENSE ENTERPRISE CAPABILITIES TO PREVENT BIOINCIDENTS.

 Conduct basic and applied biosafety and biosecurity research to provide an evidence base for improving safety and security practices



- Establish capabilities to conduct rapid-response, realtime R&D during bioincidents to inform ongoing response measures
- Develop plans that implement or support surge capabilities across response sectors
 - Medical surge response specialized clinical care, behavioral and mental health care, transition to crisis standards of care
 - Clinical guidance to assist with appropriate triage and medical management of illnesses
 - Implementing enhanced surveillance and public health measures for disease control
- Establish dedicated funding processes to respond



- Ensure plans consider the provision of MCMs to personnel performing mission-essential functions
- Ensure the reliability of supply chains to provide necessary MCMs
- Needs of at-risk individuals in planning for MCM distribution and dispensing
- Establish procedures and guidelines for the use of MCMs, including personal protective equipment (PPE), and infection control strategies
- Establish and identify medical centers capable of providing specialized care



- Strengthen healthcare system preparedness to enhance hospital and health care facilities' ability to maintain health care operations
- Establish capabilities to conduct clinical research at the onset of a bioincident to inform optimal clinical care strategies
- Facilitate movement/delivery of supplies critical to response and recovery



- Promote consistent messaging to inform key audiences, expedite desired response actions, and address public uncertainty and fear
- Identify a cadre of academic and private sector experts who would be encouraged to interact with traditional and social media and provide accurate information
- Strengthen pre-incident relationships with private sector social media and other non-traditional media partners
- Maintain a core capability to develop, produce, and refine diagnostic tests rapidly to meet outbreak response needs



- Improve or develop affordable, flexible, and multifunctional PPE for responders
- Establish manufacturing surge capacity for MCMs, including diagnostic tests and PPE
- Establish and promote best practices for implementing CMMs during bioincidents
- Develop and verify plans for all phases of environmental cleanup for facilities, equipment, and the environment
- Promote the implementation of CMMs that can prevent transmission of communicable disease (e.g., voluntary isolation, hand washing with soap, covering mouth when coughing or sneezing, voluntary home quarantine



GOAL 4:

RAPIDLY RESPOND TO LIMIT THE IMPACTS OF BIOINCIDENTS.

- Plan to use the Defense Production Act of 1950, as amended (2009) (50 U.S.C. 2061-2071) to obtain and facilitate distribution of resources that are urgently needed
- Conduct real-time clinical research to evaluate promising investigational MCM
- Facilitate implementation of crisis standards of care
- Maintain comprehensive and effective continuity of operations
- Identify and combat misinformation



GOAL 5:

FACILITATE RECOVERY TO RESTORE THE COMMUNITY, THE ECONOMY, AND THE ENVIRONMENT AFTER A BIOINCIDENT.

- Support restoration of critical infrastructure
- Support provision of long-term medical and behavioral health services to affected populations, including for emergency responders.





Formerly the Blue Ribbon Study Panel on Biodefense

HOLDING THE LINE ON BIODEFENSE

STATE, LOCAL, TRIBAL, AND TERRITORIAL REINFORCEMENTS NEEDED

BIPARTISAN REPORT OF THE BLUE RIBBON STUDY PANEL ON BIODEFENSE

October 2018





- FORTIFY EMERGENCY MEDICAL SERVICES
- IMPROVE STOCKPILE DISTRIBUTION AND PHARMACY READINESS
- INCREASE HEALTH CARE SURGE CAPACITY
- AUGMENT LABORATORY RESPONSE
- RECTIFY SHORTFALLS IN TRIBAL PUBLIC HEALTH EMERGENCY PREPAREDNESS
- OVERCOME BARRIERS TO TERRITORIAL BIOSURVEILLANCE AND EMERGENCY RESPONSE
- ALLOCATE RESPONSE FUNDING BEFORE BIOLOGICAL CRISES OCCUR
- ASSUME BROADER LEADERSHIP OF BIODEFENSE





MMWR Recomm Rep 2017;66(No. RR-1):1-34



At this conference

- Adapting, Emerging, and Re-emerging Microorganisms: Focus on Coronavirus
- Addressing Challenges and Gaps in Preparedness
 - Waste Management and Disposal
- Lessons from NETEC
- Keynote Lisa Brosseau

COMMENTARY: COVID-19 transmission messages should hinge on science

- Communication Concepts to Manage Perception, Stigma, and Stress
- Education and Training to Respond to Bioemergencies
- Protecting Yourself from COVID-19 in the Workplace



Closing thoughts

- Wash your hands!
- Don't touch your face!
- Monitor your health!
- Get some rest!





Questions?