Ebola Virus Disease: Preparedness, Response and Lessons Learned at the State and Local Level

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Main Points on the Ebola Response

• It has been a major effort for state agencies
• It was a success!
• We learned a lot
  ▪ Partnership and coordination are critical
  ▪ Jurisdictional and regulatory issues are challenging in an emergency
  ▪ Specialized resources are valuable
  ▪ Global public health issues can impact California
Background on Ebola

- First identified in 1976
- Caused multiple outbreaks in Africa
  - Largest previously — 425 cases in Uganda
- Primarily spread by direct contact
  - Family members
  - Health care providers
  - Contaminated equipment
  - Burial practices
- Limited experience outside of Africa

2014 Ebola Outbreak in West Africa

- Began in GUINEA in early 2014
- Spread to SIERRA LEONE and LIBERIA
- Transmission in Mali and Nigeria
- Imported cases in several countries
U.S. Cases

- Multiple persons evacuated to U.S. and treated successfully at specialized facilities
- September 2014 — returned traveler in Texas
  - Public health not involved (prior to monitoring)
  - Diagnosis delayed
  - Transmission to two nurses

U.S. Preparedness and Response

- National guidelines
- Returning traveler monitoring
  - Identified on arrival
  - Monitored daily by public health
  - Some movement restrictions
- Treatment hospital network
- EMS preparation
- Laboratory testing network
Returning Traveler Health Care

- Enhanced triage system
  - Public health monitoring
    - Track persons at risk
    - Alert facilities before arrival
  - Health care facility screening for travel
- Specialized infection control resources
  - Training
  - Equipment
  - Physical space
- Goals
  - Improve patient care
  - Prevent nosocomial transmission

Another U.S. Case

- October 2014 — returned volunteer health care worker in New York
  - Under monitoring
  - Treated at designated Ebola treatment center
  - No transmission
California Preparedness and Response — Collaboration

- Multiple state agencies
  - California Department of Public Health
  - Emergency Medical Services Authority
  - Department of Industrial Relations – Cal/OSHA
  - California Office of Emergency Services
- Local health departments
- Health care facilities
- Local EMS
- Wastewater agencies
- Medical waste providers
- Others

CDPH Preparedness and Response

- Activation of Emergency Operations Centers
- Daily executive staff meetings
- Issuance of guidance/recommendations
- Implementation of traveler monitoring
- Technical consultation
  - Clinical (24/7)
  - Environmental
  - Infection control/hospital preparation
  - Laboratory
- Communication
  - Hotline
  - Website
  - Statewide calls (local public health and health care)
  - Media
- Procure specialized equipment
Traveler Monitoring — CDPH Role

- Implement system in California
- Receive notification from CDC
- Transmit information to local public health
- Receive data on travelers from local public health and transmit to CDC
- Assist with difficult travelers
- Coordinate jurisdictional transfers
- Coordinate decisions about ill travelers
- Plan for special circumstances

Traveler Monitoring — Local Role

- Daily monitoring of travelers (21 days)
  - Mostly by telephone
  - Some face-to-face
- Report to CDPH
- Respond to illness
Traveler Monitoring — Data
(October 2014 to September 10, 2015)

• Nationally, over 22,000 monitored
• In California:
  ▪ 1076 monitored to date
  ▪ 1048 (97%) low risk
  ▪ 26 (3%) some risk
  ▪ Monitored in 41/61 local health jurisdictions
  ▪ Few developed Ebola-consistent symptoms
    ✓ Evaluated at Ebola treatment or assessment hospitals
    ✓ 11 tested for EVD — all negative

As of September 21, 2015...

No further monitoring of returning travelers from Liberia nationally
National Hospital Strategy — Tiered Response

- Frontline hospitals
  - Identify, Isolate, Notify
- Assessment hospitals
  - Evaluation, care, and management up to 96 hours
- Treatment hospitals
  - Full care and management
  - Adult and pediatric capacity

California’s Ebola Treatment Hospitals

- University of California Medical Centers
  - Davis
  - San Francisco
  - Los Angeles
  - Irvine
  - San Diego
- Kaiser Permanente Medical Centers
  - South Sacramento
  - Oakland
  - Los Angeles
- Cedars-Sinai Medical Center
California’s Ebola Assessment Hospitals

• CDPH working with three local health departments and hospitals
  ▪ Provide greater geographic coverage for the state
  ▪ Expand capacity for pediatrics

Main Points —
This Was a Major Effort

• For state agencies
  ▪ Issue guidelines and recommendations
  ▪ Establish statewide strategic systems
  ▪ Coordinate partners
  ▪ Communicate with stakeholders
  ▪ Provide technical resources
    ✔ Expert consultation
    ✔ Laboratory services
  ▪ Procure specialized equipment

• For many partners
Main Points —
This Was a Successful Effort

- National goal: zero transmission
- Extensive system implemented to prevent transmission in California
- Many lessons learned for future events

Lessons Learned

- Partnership and coordination are critical
  - Successful effort depended on many partners
  - Regular communication between partners essential
Lessons Learned

- Partnership and coordination are critical
- Jurisdictional and regulatory issues can be challenging in an emergency
- Specialized resources are valuable
  - Need to maintain facilities with advanced capacity
  - Tiered facility approach useful
  - Access to supplies important
Lessons Learned

- Partnership and coordination are critical
- Jurisdictional and regulatory issues can be challenging in an emergency
- Specialized resources are valuable
- Global health issues can impact California

Similar Global Health Threats

- Serious disease with potential for nosocomial transmission
- Ebola
  - Current risk much reduced but ongoing
  - Next time?
- Measles
- MERS
- Influenza
- Other emerging disease
Lessons Learned

• Partnership and coordination are critical
• Jurisdictional and regulatory issues can be challenging in an emergency
• Specialized resources are valuable
• Global health issues can impact California
• Importance of triage
  ▪ Infection control
  ▪ Patient care

A Few Other Things Happened...

• Pertussis in 2014
  ▪ 11,203 reported cases in 2014
  ▪ 456 hospitalizations and 3 deaths
  ▪ Highest reported incidence in 60 years
• Measles in 2015
  ▪ 131 cases in California
  ▪ 178 cases in 6 states, Mexico, and Canada
• Enterovirus D68 in 2014
  ▪ Nationwide outbreak
  ▪ Severe respiratory and neurologic illness
• MERS
  ▪ Ongoing outbreak in Middle East
  ▪ >70 suspects identified in California to date
  ▪ Large outbreak in Korea
Questions?

Thank you

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