Public Health and Healthcare Collaboration to Fight Ebola

Daniel M. Sosin, MD, MPH, FACP
Deputy Director and Chief Medical Officer,
Office of Public Health Preparedness and Response
Multi-Sector Collaboration

Nursing and Medicine

Healthcare System

Academia and Training

Public Health
Setting the Stage: International Challenges

- Lack of infrastructure
- Overburdened public health and healthcare systems
- High population mobility
- Porous borders
- Geographic breadth
- Lack of knowledge of Ebola
  - Education
  - Fear and stigma
  - Distrust of outsiders
  - Traditional beliefs
Overall Goals in Outbreak Response

- Patient Care
  - Experienced and trained healthcare workers

- Stop human to human transmission
  - Case identification
  - Contact tracing
  - Infection control
  - Safe burials
Overall Goals in Outbreak Response

- Community education
  - Text messages, radio and video messages in local languages, fact sheets, health posters, and pamphlets
Public Health in West Africa

Interviewing people who may have been in contact with Ebola patients and watch closely for the development of symptoms.

Testing samples of suspected Ebola cases.
Public Health in West Africa

Communicating health messages in West Africa and the United States.

Educating healthcare workers in the U.S. and in West Africa.
Public Health in West Africa

Advising travelers how to protect their health.

Training officials in West Africa how to prevent sick travelers from getting on planes.

Working with partners at U.S. ports of entry to identify travelers who show signs of illness.
Domestic Response

- 1st imported case
- Infection of healthcare workers
- Infection of returning healthcare worker
- Fear and stigma
Responding to Domestic Challenges

- CDC rapid response teams
- Updated PPE guidance
- Ebola-ready treatment centers
- Updated active and direct monitoring guidance
- Public health and healthcare system outreach and training
- State coordination
- Public education to address fear and stigma
Responding to Domestic Challenges: Healthcare Systems

- Extensive hospital outreach
- Calls with hospital associations
- Calls with nurses’ associations
- More U.S. hospitals ready to treat Ebola patients
Responding to Domestic Challenges: Rapid Response

- Rapid Ebola Preparedness Teams (REP)
- CDC Ebola Response Teams (CERT)
Responding to Domestic Challenges: PPE

- Enhanced Personal Protective Equipment (PPE)
  guidance distributed October 20, 2014

3 Principles

1. No skin exposure
2. Rigorous training
3. Supervised by trained monitor
Responding to Domestic Challenges: Movement and Monitoring

- New Monitoring and Movement Guidance released October 27, 2014 and updated November 28, 2014
Responding to Domestic Challenges: Movement and Monitoring

- CDC has developed recommendations for states
  - Active monitoring if any risk
  - Risk level determines whether to restrict travel of public activity

<table>
<thead>
<tr>
<th>RISK LEVEL</th>
<th>PUBLIC HEALTH ACTION</th>
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<tbody>
<tr>
<td></td>
<td>Active Monitoring</td>
</tr>
<tr>
<td>HIGH risk</td>
<td>Yes—direct active</td>
</tr>
<tr>
<td>SOME risk</td>
<td>Yes—direct active</td>
</tr>
<tr>
<td>LOW risk</td>
<td>Yes—direct active for some*; active for others</td>
</tr>
<tr>
<td>NO risk</td>
<td>No</td>
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</table>
Responding to Domestic Challenges: State Coordination

• Weekly check-in with partner organizations

• Twice weekly newsletter updates from State Coordination Task Force

• Regularly scheduled Clinician Outreach and Communication Activity (COCA) calls, webinars and notifications

• Assistance with movement and monitoring
Advance Action and Rapid Response: NYC

Oct 20: New PPE Guidance

Oct 21: Live / Web PPE Training in NYC

Week of Oct 21: Bellevue REP Assessment

Oct 23: CERT Deploy

Oct 23: Ebola +
Progress and Path Forward

International Response

Domestic Preparedness

Healthcare and Public Health Collaboration

Find every last case
For the most current information, visit www.cdc.gov/ebola

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov  Web: www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Ebola and Schools and Programs of Public Health

Harold Cox, MSSW
Associate Dean for Public Health Practice
Associate Professor of Community Health Sciences
Boston University School of Public Health
Boston University
School of Public Health

• National Experts
  • George Annas, JD, MPH
  • Wendy Mariner, JD, MPH
  • Nahid Bhadelia, MD

• Seminars
  • Ebola: The Front Line
  • The Facts about Ebola for New England: Facts vs. Hype

• Ebola Case Study
  • Explore reactions in the US
  • Understand roles of health care organizations in addressing Ebola
  • Explore travel restrictions, isolation and quarantine, fear, who’s in charge.
Rollins School of Public Health, Emory University

- **National Experts**
  - Carlos del Rio, MD,
  - Bruce Ribner, MD,
  - G. Marshall Lyon III, MD,
  - Aneesh Mehta, MD,
  - Alex Isakov, MD, MPH

- **Seminars**
  - EMS: Transport and Care of Patients Ill with EVD.
  - Ebola at Emory: Patients to Populations and How We Prevent Ebola.
  - Crisis and Emergency Risk Communication: Examples from Ebola.
  - From the Field and Onward: Ebola.
  - Seen and Unseen: Surveillance for the Ebola Outbreak.
  - Emory Student = Ebola Expert?

- **Course Development**
  - Ebola: An Evolving Epidemic

- **Resources**
  - Emory Medicine Magazine: Feature stories on Ebola
  - Emory Healthcare Ebola Preparedness website
Public Health Training Centers

Goal: to improve the nation’s public health system

- Audience: state and local public health workers and community health workers
- Method: providing training programs and support for graduate students
- 10 regional centers; one national center
- Funding provided by HRSA
Examples of Work in New England

- Online modules
- Public Health Nursing Webinars
- Public Health Foundations Course
- Managing Effectively in Today’s Public Health Environment
- Healthy Homes
## Content Area Experts and Leads

<table>
<thead>
<tr>
<th>GRANTEE (LEAD)</th>
<th>REGION</th>
<th>CONTENT AREA</th>
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<tbody>
<tr>
<td>Boston University</td>
<td>1</td>
<td>Public Health Preparedness</td>
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<tr>
<td>Columbia University</td>
<td>2</td>
<td>Health Disparities, Health Equity, Social Determinants of Health</td>
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<tr>
<td>University of Pittsburgh</td>
<td>3</td>
<td>Health Informatics and Health Information Technology</td>
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<tr>
<td>Emory University</td>
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<td>Infectious Diseases</td>
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<td>University of Illinois</td>
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<td>Environmental Public Health</td>
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<tr>
<td>Tulane University</td>
<td>6</td>
<td>Behavioral Health</td>
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<tr>
<td>University of Iowa</td>
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<td>Chronic Condition: Diabetes</td>
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<tr>
<td>University of Colorado</td>
<td>8</td>
<td>Chronic Condition: Cancer</td>
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<tr>
<td>University of Arizona</td>
<td>9</td>
<td>Nutrition, Physical Activity, and Obesity</td>
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<tr>
<td>University of Washington</td>
<td>10</td>
<td>Violence and Injury Prevention</td>
</tr>
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</table>
PHTC Activities

- Providing information
- Conducting trainings
- Learning opportunities for stakeholders
- Communicating with public
- Finding presenters/hosting webinars
- Developing messages for various audiences
## Ebola: Public Health Issues

<table>
<thead>
<tr>
<th>Issue/Topic</th>
<th>Distance-Based Trainings Available</th>
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<tbody>
<tr>
<td>General</td>
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<tr>
<td>Risk Communication</td>
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<tr>
<td>Decontamination</td>
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<td>Waste disposal concerns</td>
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<td>Surveillance (including contact tracing)</td>
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<tr>
<td>Isolation and Quarantine</td>
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<tr>
<td>Working with Volunteers</td>
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<tr>
<td>How to Protect Workers</td>
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<td>Travel Restrictions</td>
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<td>Drills and Exercises</td>
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<tr>
<td>Issue/Topic</td>
<td>Distance-Based Trainings Available</td>
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</tr>
<tr>
<td>General</td>
<td>• Emergency Preparedness in MA&lt;br&gt;• Ebola awareness in American Sign Language</td>
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<tr>
<td>Isolation and Quarantine</td>
<td>• Legal Nuts and Bolts of Isolation and Quarantine Part 1: Administrative Process&lt;br&gt;• Legal Nuts and Bolts of Isolation and Quarantine Part 2: Court Process&lt;br&gt;• Isolation and Quarantine for Law Enforcement:</td>
</tr>
<tr>
<td>Surveillance (including contact tracing)</td>
<td>• Surveillance of Infectious Diseases</td>
</tr>
<tr>
<td>How to Protect Workers</td>
<td>• Public Health Workforce Protection&lt;br&gt;• Dealing with Stress in Disasters&lt;br&gt;• Guidance for Donning and Doffing Personal Protective Equipment (PPE) During Management of Patients with Ebola Virus Disease in U.S. Hospitals (for physicians)&lt;br&gt;• Ebola: Donning and Doffing of Personal Protective Equipment (PPE) (for physicians)&lt;br&gt;• Infection Control for Point of Dispensing (POD) Workers</td>
</tr>
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</table>
Preparing Faculty and Students Regarding Ebola: The Nebraska Method

Chris Kratochvil, M.D.
Assistant Vice Chancellor for Clinical Research, UNMC
Vice President for Research, Nebraska Medicine
The Nebraska Method

Overview of Presentation

• Historical Perspective
• Resources Developed
• Preparation of Faculty & Students
Nebraska Biocontainment Unit
Established 2005

- Joint project involving Nebraska Medicine, Nebraska HHS, & UNMC
- Designed to provide treatment for those affected by bioterrorism or extremely infectious diseases.
- Largest facility of its kind in the U.S.
- Nebraska’s Bio-Safety Level-3 laboratory on campus
Education & Training Resources

HEROES Program: Established 2005

- **Healthcare and Emergency Responder Organization Education Through Simulation**
- Interdisciplinary approach to preparedness for biological, chemical, radiological and natural disaster emergencies.
- Spearheaded by UNMC College of Nursing, in collaborate with College of Medicine, School of Allied Health Professions & Center for Preparedness Education.
- Rich video & simulation resource
Adaptation & Expansion of Materials

VIRAL HEMORRHAGIC FEVER
EBOLA PATIENT CARE
Donning & Doffing PPE

Download our free, printable, handouts developed for the Nebraska Bioccontainment Unit at The Nebraska Medical Center.

www.unmcheroes.org
The Nebraska Ebola Method: For Clinicians

https://www.unmc.edu/cce/ neb_ebola.htm

Apple iTunes U

- General information on Ebola
- Best Practices
- Personal Protective Equipment (PPE)
- Triage in ER & Clinics
- Patient Management
- Employee Exposure
- Laboratory
- Cleaning/Waste
- Transportation
The Nebraska Ebola Method: For the Community

http://www.unmc.edu/publichealth/news/ebola-community.html

Apple iTunes U

- What do I need to know about Ebola?
- Ebola Fact Handout
- Is it Flu or Ebola?
- What you need to know if you live in U.S.
- Talking with Children
- Coping with Stress
- Interviews with Biocontainment Doctors
- Interviews with Biocontainment Nurses
- Experimental Medications and Vaccines
- Traveler's Health
- Facts about Ebola & Risks with Pets
- Legal Authorities, Isolation & Quarantine
- Facts about Ebola in US
Ebola Training & Education Initiatives

• Training of “Ebola Hospitals” on behalf of CDC
• Participation in CDC site visits
• CDC Teleconferences
• Launch of the Association of Healthcare Emergency Preparedness Professionals
• Preparation of ER, clinics, staff
• Outreach to students throughout UNMC
• GME Policy & Curriculum
Ebola Training & Education Initiatives

• Public Health Education
• Medical Education
• Nursing Education
• Allied Health Education
• Residency Programs
• Graduate Programs
• Paramedic Programs
Resident Participation in the Care of Patient with Suspected High Risk Infectious Agent Policy

Summary of Select Key Elements

Patients infected with high risk infectious agent presents a clinical learning opportunity as well as a risk to the safety of learners and the community.

Faculty educators must define the appropriate participation of residents in clinical care.

For highly infectious diseases with which we have limited clinical experience, residents should not be compelled to participate in direct patient care.

Residents should participate in educational activities provided within their departments and the institution addressing screening protocols for high risk infectious agents, appropriate use of PPE, and clinical discussions of patients affected by these agents.
Highly Infectious Diseases & Ebola Curriculum Proposal for GME Programs

Outline

- General Information on Specific Agent/Ebola Screening Processes
- Personal Protective Equipment (PPE)
- Known Exposure Protocol
- Confirmed Patient Management
- Laboratory
- Patient Transport
- Cleaning/Waste Disposal
University of Maryland School of Nursing
Ebola Response

**Contextual Positioning**
Prior to August 2014
- Robust global health footprint at the University of Maryland, Baltimore
- Interprofessional context at University of Maryland, Baltimore

**Emergent Activities**
September-November 2014
- Global health collaboration initiated
- University level support for grassroots activity
- Campus-wide collaboration to address local and global needs related to Ebola

**Ongoing Activities**
November-present
- Advocacy for university partners and healthcare workers
- Technical Support with health system rebuilding post Ebola
University of Maryland Baltimore
Seven Schools/Seven Scholars
Office of Global Health-School of Nursing (UMSON)

- **Rwanda**
  - Human Resources for Health Program
  - Clinton Health Initiatives
- **Haiti**
  - Institutional Strengthening/ID Certificate Program
- **Nigeria***
  - 3 university-based SONs
- **Liberia***
  - Stella Maris Polytechnic Institute, Mother Patern College of Health Sciences

Additional university-based partnerships in:
- Kenya - University of Nairobi
- Korea - Chungnam National University
- Lebanon - American University of Beruit
- Oman – Sultan Qaboos University & Oman Nursing Institute

Field Projects and Sites

- **Nigeria**: Research and Quality Improvement on Nursing Workforce Issues in HIV Care and Universal Precautions
- **Liberia**: Assessment of Primary Health Care
- **Kenya**: Traditional Birth Attendant Study
- **Malawi**: Maternal Health Services Survey and Participatory Action Community Assessment
- **Zambia**: Assessment of Community Health Workers in Rural HIV Clinics & USAID Africa Bureau Internship
- **Haiti**: Program Evaluation of Infectious Disease Certificate Training for Nurses
- **U.S.**: Obstetric Care for Refugee Women in Baltimore, MD

UMSON-OGH’s partnerships with seven key GH institutions have successfully created diverse field projects in seven different countries.

*Countries impacted by Ebola outbreak
UMSOM Global Footprint in 35 Countries

Dean Reece, 2014
Interprofessional Activities

• Interprofessional collaboration-strategic approach for the campus

• Center for Interprofessional Education
  – Director Dean Jane Kirschling, UMSON

• Global Health Interprofessional Council

• Center for Global Education
Interprofessional Response to Ebola?

Ad hoc meeting called by School of Nursing’s Office of Global Health

– Representatives from UMB’s SON, SOL, SOM’s The Center for Vaccine Development and the Institute of Human Virology, UMMC’s Environmental Health Services, and the WHO Collaborating Center for Occupational Health.

• The World Health Organization already actively engaging
  – Center for Vaccine Development to assist with ethical issues related to vaccine development, deployment, and implementation;
  – The UMB WHO Collaborating Center for Occupational Health regarding development of policies and guidelines related to personal protective equipment

• Liberian and Nigerian university partners and NGOs (IMC, IRC, PIH)
  – Requesting assistance from UMB School of Nursing for supplies, personnel, infection control education, and training of health professionals and guidance on a nursing response.

• University of Maryland Medical Center representatives
  – Preparing to implement preventive strategies in the health system and university, including considering how to safely re-integrate health professionals that may be returning from high risk Ebola areas.

• One healthcare worker preparing for deployment to Sierra Leone
Adhoc Meeting Outcomes

• Interprofessional discussion resulted in three requests:
  – Overwhelmingly the group wanted support at the President’s level

  1. Ebola Information Network
     – Serve as a reservoir for collaborative sharing of presentations, training materials, new activities, policies and procedures

  2. Interprofessional Ebola Symposium
     – Increase awareness and preparedness on the University campus

  3. Funding opportunities
     – Support ongoing partnership activities to focus on Ebola, other emerging infectious diseases, and health system strengthening post Ebola
Emergent Activities

Interprofessional Leadership
- Specific targeted activities
- Dr. Ogbolu in SON
- Dr. James Campbell in SOM

1. Ebola Information network
   - Internal resource for faculty
   - Multiple emerging networks and HS/HSL website
   - Email updates from participating faculty

2. Central Repository for focused message for School of Nursing
   - Policies and procedures & updates shared
   - Serial emails and Responses to faculty and students

3. Ebola Symposium

4. Funding Support for University Partners
UNIVERSITY OF MARYLAND, BALTIMORE

EBOLA SYMPOSIUM

TUESDAY
NOV. 18
12:30 to 5 p.m.

BE AWARE. BE PREPARED.
An Interprofessional Approach.
Symposium Highlights

Interprofessional event sponsored by:

- President’s Office; Office of Global Health SON; Global Health Interprofessional Council; Center for Global Educational Initiatives; Center for Vaccine Development in the School of Medicine

• **Keynote Speaker**
  - Joel Breman, MD, DTPH, FIDSA, Senior Scientist Emeritus at the *NIH Fogarty International Center*
  - Historical perspective on Ebola from 1970’s until now

• **UMB interprofessional experts from**
  - *School of Medicine* discussed their roles in Ebola vaccines and therapies, and their leadership efforts on the ground related to addressing the Ebola outbreak in Nigeria
  - *School of Law* examined the legal issues surrounding mandatory quarantines,
  - *School of Nursing* articulated the impact of Ebola on the nursing workforce locally and globally.
  - The Maryland Department of Health and Human Hygiene & voices from the ground included Debra Wilson who worked in Liberia with Doctors without Borders
Ongoing Activities
Nurses-Facing Frontline Challenges

• Most cases and fatalities in Liberia, Guinea & Sierra Leone
  – High burden of disease
    – Maternal, neonatal mortality; HIV/AIDS, Malaria
  – Lack of human resources
    – High provider/nurse to patient ratios
    – Nurse and physician deaths
  – Lack of material resources
    – Personal protective equipment
    – Basic supplies
  – Need for enhanced training for atypical conditions
Mother Patern College of Health Sciences in Liberia
Nursing Leadership & Advocacy

- **Health system strengthening post Ebola**
- **Advocacy**
  - Engaging key stakeholders, nursing organizations, and policymakers
  - Continuing the conversation- Baltimore Sun Article
- **Partnering with Organizations**
  - University partners in West Africa
  - Partners in Health (PIH)
    - Long-term rebuilding post Ebola
  - International Medical Corp
    - Crisis intervention
    - Recruiting personnel
  - Doctors without Borders
- **Interprofessional collaboration ongoing**
Opportunities to Help

- **Immediate**
  - Support health care workers who go
    - Tangible and intangible
    - Offer recognition for healthcare workers as heroes
    - UMB Global Health support fund to be utilized to support the education, research, and international partnership initiatives See: [https://cf.umaryland.edu/checkout/campus/giving/](https://cf.umaryland.edu/checkout/campus/giving/)

- **Long term**
  - Support rebuilding of health care systems
  - Provide ongoing support for health professionals in low resource settings