PHC 6251 Week 12, International Surveillance, Part 2

Global Health Surveillance
Donna Haiduven, PhD, RN, CIC

Importance of Global Health Surveillance
- Critical to identify &/or prevent emerging/reemerging/infectious/non-communicable diseases
- Important to provide timely health info.
- PH problems addressed effectively by surveillance systems
- Examples: smallpox & polio

IHR Responsibilities of Individual Countries
- Individual countries responsible for disease surveillance/response
- IHR most important & only binding international agreement on disease control
- 2005 revision includes additional infectious diseases & regulation to other PHEIC
- IHR further shifts focus from border control to source detection
- Require countries to report PHEIC to WHO


IHR Core Surveillance Capacity

http://www.who.int/gho/ihr/ihr_001.jpg?ua=1

http://gamapserver.who.int/gho/interactive_charts/ihr/monitoring/atlas.html?indicator=i2
Global Disease Detection (GDD) Program

- GDD part of DGHP at CDC
- rapid detection, identification & prompt containment of emerging infectious diseases & bioterrorist threats
- global health security
- requires cooperation

GDD Regional Detection Centers

- **10 locations**: Bangladesh, China, Egypt, Georgia & the South Caucasus, Guatemala & Central America, India, Kazakhstan & Central Asia, Kenya, South Africa, & Thailand
- **Selection based on 5 factors**: public health significance, country commitment, established CDC presence, established regional reach, & international partner presence

GDD Core Capacities

- Emerging infectious disease detection & response
- Training in field epidemiology & laboratory methods
- Pandemic influenza preparedness & response
- Zoonotic disease investigation & control
- Health communication & information technology
- Laboratory systems & biosafety

Key Accomplishments 2006-14

- **Outbreak response**: responded to >1700 outbreaks & other PH emergencies
- **Discovered** 77 new pathogens & capacity to identify 289 (up from 11 in 2006)
- **Trained** 100,000 worldwide; increased # Field Epi Training Program (FETP) to 676 (from 26 in 2006)
- **Covered** 13.1 with population-based surveillance for pneumonia & other diseases/syndromes
- **Built network capacity**

Surveillance in Kibera, Kenya

- Click on this link: [http://www.cdc.gov/globalhealth/video/gdd/in_kibera.htm](http://www.cdc.gov/globalhealth/video/gdd/in_kibera.htm)

GCD Scientific Publications

- [http://www.cdc.gov/globalhealth/gddf/gdd/publications.htm](http://www.cdc.gov/globalhealth/gddf/gdd/publications.htm)
- **Over 100 publications in 2014 alone**
Background Information on Ebola

- What is Ebola?
- What does it cause & in what species?
- Where is it found?
- How many kinds of Ebola are there?
- What is the natural reservoir host?
- How do humans acquire Ebola?

Ebola Virus Outbreak 2014-15

- 2014 largest outbreak in history
- First Ebola epidemic
- Current case count & fatality rates:
  http://www.cdc.gov/vhf/ebola/outbreaks/guinea/index.html
- Control measures complicated by political, religious & cultural issues

WHO Declaration of Ebola as PHEIC

- August 8, 2014
- extraordinary event & PH risk to other States
- possible consequences of further international spread
- coordinated international response necessary
- Unanimous vote that Ebola constitutes PHEIC

Challenges for Affected Countries

- Fragile health systems with significant deficits
- Inexperience, misperceptions re: disease
- ↑ mobility & cross-border movement of infected travelers
- ↑ number of infections among HCWs

Surveillance-related Recommendations August 2014

- States with Ebola transmission
- States with potential /confirmed case & unaffected States with land borders with affected States
- All States

Status of Recommendations

- Issued as “Temporary Recommendations” to reduce the international spread of Ebola
- Reassessment of the situation within 3 months
- Additional meetings September & October 2014; January, April & July 2015
Measures for Ill Travelers

What was done to prevent ill travelers in West Africa from getting on a plane?

– In West Africa
– During Travel
– In the United States

Additional Travel Issues

– Instances of civil unrest & violence against aide workers
– Liberia practicing strict control measures related to travel
– U.S. Travel Alert: Warning Level 3 - Avoid non-essential travel
– Humanitarian & HCWS avoid contact with blood/body fluids of people with Ebola

Surveillance: Active & Direct Active Monitoring for Ebola

– **Active monitoring** - state or local PH health authority assumes responsibility for establishing regular communication with potentially exposed individuals
– **Direct active monitoring** - PH authority conducts active monitoring through direct observation

Ebola CARE packets


Summary

– IHR responsibilities of countries
– Capacity for surveillance under IHR
– Global Disease Detection
– Case Example of Ebola virus as a PHEIC
– Implications for surveillance