Briefing on the Ebola Virus Outbreak

World Health Organization

COUNTRY OFFICE FOR India

17 September 2014
Outline

1. Key Facts - Ebola
2. Current Outbreak and Challenges - West Africa
3. WHO Recommendations
4. WHO and UN Response
5. Preparedness for EVD-India
Key facts – Ebola

- Ebola Viral Disease (EVD), formerly known as Ebola Haemorrhagic Fever, is a severe, often fatal illness in humans.

EVD is caused by infection with a virus of the family Filoviridae, genus Ebolavirus.
History of Ebola virus outbreaks

- 1976 - Ebola first appeared in two simultaneous outbreaks in Sudan and DR Congo
- Up until **December 2013** – a total of 23 outbreaks recorded: 2388 human cases and 1590 deaths
  - Contained through isolation of affected areas
- Current outbreak began in Guinea in late 2013 and spread to neighboring countries
How Ebola outbreaks start

- Zoonotic infection, i.e. humans are infected by animals - chimpanzes, gorillas, monkeys, forest antelopes, fruit bats, porcupine – found in tropical rainforests
- Fruit bats are considered likely hosts of the Ebola virus based on current evidence
- It is unknown how the 2014 outbreak in West Africa started
1. Virus reservoir: Fruit bats

The virus maintains itself in fruit bats. The bats spread the virus during migration.

2. Epizootic in primates

Infected fruit bats enter in direct or indirect contact with other animals and pass on the infection, sometimes causing large-scale epidemics in gorillas, chimpanzees and other monkeys or mammals (e.g. forest antelopes).

3. Primary human infection

Humans are infected either through direct contact with infected bats (rare event), or through handling infected dead or sick animals found in the forest (more frequent).

4. Secondary transmission

Secondary human-to-human transmission occurs through direct contact with the blood, secretions, organs or other body fluids of infected persons. High transmission risk when providing direct patient care or handling dead bodies (funerals).
Human outbreaks

- Transmission within human populations is from person-to-person
- Direct contact through broken skin/mucous membranes with blood, other bodily fluids, tissues or secretions (stool, urine, saliva, semen) of Ebola cases
- Or contact with environments contaminated with infectious fluids such as soiled clothing, bed linen, or used needles
High-risk groups during Ebola outbreaks

- Health care workers that care for Ebola cases who are not protected with personal protective equipment (PPE) > 300 HCWs affected, half of whom have died
- Family members, care-givers or others in close contact with sick Ebola patients
- Mourners who have direct contact with bodies or secretions of deceased Ebola cases
- For countries without Ebola cases, travellers need to be kept informed of the risks
Disease in humans

- Incubation period (time from infection to onset of symptoms): 2 to 21 days
- Patients become contagious once they begin to show symptoms. They are not contagious during the incubation period
- Symptoms of illness:
  - Sudden onset of fever, intense weakness, muscle pain, headache and sore throat
  - Followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding
Diagnosis

- Non-specific illness in early stages of illness
- Diseases that should be ruled out include: malaria, typhoid fever, shigellosis, cholera, leptospirosis, plague, rickettsiosis, relapsing fever, meningitis, hepatitis and other viral haemorrhagic fevers
- Diagnostic tests
  - Various diagnostic tests available
  - Samples from patients are an extreme bio-risk and testing should be under maximum containment conditions
Treatment

- Supportive care can help reduce mortality but there are no known, proven safe and efficacious treatments or antiviral drugs for treating Ebola
  - Earlier initiation of treatment leads to improved outcomes
- No licensed vaccines are currently available although some are currently in early stages of development and testing
- Experimental therapies and vaccines
  - Very limited availability
  - Limited information on safety & efficacy
Ebola: West Africa, 2014

- Current outbreak – cases reported since March 2014
- Affected countries: Guinea, Sierra Leone, Liberia, Nigeria, Senegal
- Total cases in above 5 countries: 4,984; Deaths: 2,461 (as of 13th Sept)*
- Case Fatality Rate (countries with intense transmission): 49%
- Most complex, largest outbreak of Ebola in the world, in settings with weak health systems

*The total number of cases is subject to change due to reclassification, retrospective investigation, consolidation of cases and laboratory data, and enhanced surveillance. Data reported in the Disease Outbreak News are based on best available information reported by Ministries of Health.
Geographical location of confirmed and probable cases in West Africa
15 September 2014
### Countries with intense and widespread transmission: Guinea, Liberia and Sierra Leone

<table>
<thead>
<tr>
<th></th>
<th>Cases</th>
<th>Deaths</th>
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<tbody>
<tr>
<td></td>
<td>Total Cases</td>
<td>Last 21 days</td>
<td>Total</td>
</tr>
<tr>
<td>Guinea</td>
<td>936</td>
<td>308</td>
<td>595</td>
</tr>
<tr>
<td>Liberia</td>
<td>2407</td>
<td>1383</td>
<td>1296</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>1620</td>
<td>653</td>
<td>562</td>
</tr>
<tr>
<td>Total</td>
<td><strong>4963</strong></td>
<td><strong>2344</strong></td>
<td><strong>2453</strong></td>
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*Confirmed, probable and suspected cases
Countries with initial case/localized transmission

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases</th>
<th>Deaths</th>
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</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>Senegal</td>
<td>1</td>
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*Confirmed, probable and suspected cases*

A separate outbreak of Ebola is currently ongoing in the Democratic Republic of Congo (DRC) - this is unlinked to the current outbreak in West Africa - as per latest available update: 62 cases and 35 deaths have been reported in DRC due to Ebola virus disease.
Ebola in West Africa

“Extraordinary Event”

- Declared a Public Health Emergency of International Concern (PHEIC) by DG WHO on 8 August 2014, under the International Health Regulations (2005):
  - Serious consequences of international spread, severity/fatality of illness (no vaccine or cure); intense community and health facility spread; weak health systems in affected and at-risk countries
  - Coordinated international response is essential to stop and reverse spread of Ebola
Ebola in West Africa: 
*Health Systems preparedness is critical*

- Affected countries have limited capacity for standard containment measures, including:
  - Getting Ebola treatment centers fully operational with personnel and equipment
  - Early detection and isolation of cases
  - Contact tracing and monitoring
  - Hospital procedures for infection control
  - Logistics: personal protective equipment and disinfectants
  - Trained human resources
General strategy to CONTROL Ebola outbreak

- Behavioural and social interventions
  - Anthropological evaluation
  - Formal and informal modes of communication
  - Social and Cultural practices
  - Communication Press Journalists
  - Security Police
  - Lodging Food
  - Social and Epidemiological mobile teams

- Medias
  - Finances Salaries
  - Transport Vehicles

- Coordination
  - Control of vectors and reservoirs in nature
  - Clinical case Management
  - Follow-up of contacts

- Ethical aspects
  - Triage In/out
  - Barrier nursing
  - Clinical trials Ethics committee

- Epidemiological investigation, surveillance and laboratory
  - Search the source
  - Database analysis

- Logistics
  - Specimens Laboratory testing

- Infection control
  - Organize funerals
  - Duty of care Research

- Protection
  - Active case-finding

- Research
  - Opinion leaders

- Ethical aspects
  - Women, associations Traditional healers
  - Opinion leaders
  - Coordinator Medias
  - Coordination
  - Medias
  - Logistics
  - Epidemiological investigation, surveillance and laboratory
  - Infection control
  - Protection
  - Research
  - Ethical aspects
Challenges: 

**Infection Control**

- Even though Ebola is highly infectious, prevention is possible through application of strict infection control measures
  - Appropriate laboratory practices
    - Standard biosafety precautions
    - Use of personal protective equipment (PPE) by healthcare workers exposed to cases
    - Disinfection of contaminated equipment, objects and areas
    - Safe disposal of infected material
    - Safe burial practices
Challenges:
Risk Communication & Public Engagement

- **Education and communication**: Raising awareness is crucial so everyone understands what Ebola is, how it is transmitted and how to protect yourself.

- **Public fears**: Ebola is a disease that creates a lot of anxiety and fear. Clear, transparent and balanced messaging & information can help reduce such panic.

- **Public involvement**: Getting community leaders and the public to take an active role in implementing preventive measures, creating awareness and participation in the management of the outbreak, can limit spread of the disease in the community.
TRAVEL TO AND FROM EBOLA-AFFECTED COUNTRIES IS LOW-RISK HERE IS WHAT YOU NEED TO KNOW

WHILE TRAVELLING

If you develop a fever and Ebola symptoms yourself promptly inform airline personnel.

fever, weakness, muscle pain, headache, and sore throat; followed by vomiting, diarrhoea, bleeding.

Alert airline personnel about a fellow traveller who has Ebola symptoms:

AT AIRPORTS AND AT YOUR DESTINATION

DO NOT touch the body of a person who has died from Ebola.

Avoid direct physical contact with anyone who is displaying the symptoms of Ebola.

Use alcohol rub throughout the day. When hands are visibly dirty use soap and water.

Seek prompt medical attention if you have Ebola symptoms.

World Health Organization
Affected Countries:  
*WHO Recommendations*

- Declare national emergency - activate national disaster management mechanisms
- Conduct exit screening of all persons at international airports, seaports and major land crossings
- Ensure Ebola cases are isolated, treated and surveillance conducted for identification of contacts
- Strengthen health systems for adequate response (hospitals, labs, human resources, quality care, logistics, clinical support)
All Countries

WHO Recommendations

• No general ban on international travel or trade
• Provide relevant information to
  – Travelers to Ebola affected areas: with information on minimizing risks
  – General public: Ebola outbreak and measures to reduce risk of potential exposure
• Prepare to detect, investigate and manage potential cases, if and when they occur
EBOLA WHO website

- Technical information
  - Infection control
  - Social mobilization
  - Epidemiology
  - Preparedness and response
  - Patient care
- Guidelines and tools
- Meeting reports
- Disease Outbreak News

http://www.who.int/csr/disease/ebola/en/
WHO Role

• Coordination of global response to Ebola:
  – Advocacy and resource mobilization
  – Technical expertise on relevant topics including messaging
  – Human, material and financial assistance
• Provision of up-to-date expert technical guidance
• International deployments (>430) and field support in affected countries
• Ebola Response Plan and Roadmap
UN Secretary-General, Ban Ki-moon on the Ebola virus disease outbreak situation, 5 Sept 2014

"We are mobilizing in every possible way. We are together today to send out an international rescue call. The number of cases is rising exponentially. The disease is spreading far faster than the response. People are increasingly frustrated that it is not being controlled. What began as a public health emergency is evolving into a social and economic challenge for millions."

The international community needs better awareness and understanding about what it is facing. Mr. Ban Ki-moon warned that banning flights and shipping services will not keep Ebola from spreading but it will keep medical teams from reaching people most in need.
Ebola Response Roadmap

**AIM:**
- To guide and coordinate international response to EVD in West Africa
- The Roadmap consolidates *country-specific experience & knowledge* into a common framework to:
  1. Assist governments & partners in updating/resourcing country-specific plans
  2. Coordinate international partner support to implement plans

**GOAL:**
Stop Ebola transmission globally within 6-9 months, while addressing the broader socioeconomic impact in intense transmission areas & rapidly managing consequences of international spread
## Ebola Response Roadmap

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>KEY MILESTONES</th>
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<tbody>
<tr>
<td>1. Full geographic coverage with <strong>complementary</strong> Ebola response activities in countries with widespread &amp; intense transmission</td>
<td>Reverse trend in new cases &amp; areas within 2 months; stop all Ebola within 6-9 months</td>
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<tr>
<td>2. <strong>Emergency application of comprehensive Ebola response</strong> in countries with initial case(s) or localized transmission</td>
<td>Stop all transmission within 6-8 weeks of index case</td>
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<tr>
<td>3. Preparedness of all countries, esp. those sharing <strong>land borders</strong> with intense transmission areas and with international transportation hubs</td>
<td>Surveillance, preparedness, in all bordering areas &amp; int'l transport hubs in 1 month</td>
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OPERATIONALIZING THE ROAD MAP

- Human Resources
- Security
- WHO-Recognized Laboratory
- PPE, IPC & Essential Supplies
- Infrastructure & Transport

- R&D
- Information Mgmt & Data Analysis
- Technical & Normative Guidance
- Coordination & Crisis Management
MAJOR ROLES & RESPONSIBILITIES

All national governments

Local Political, Community, Traditional, & Religious Leaders

- WHO
- UN Agencies
- NGOs
- Humanitarian Organizations
- Donors
- Private Sector
UN : Activation of system-wide response for Ebola
WHO: Ebola Response Monitoring

- Assessing needs
- Aligning response measures
- Measuring response per indicators
UN: Galvanizing the world on Ebola Response

“More countries and organizations must move swiftly to support the Governments of the countries affected, through the World Health Organization Road Map and a complete overview of requirements, which will be released by the UN Office for the Coordination of Humanitarian Affairs in Geneva on September 16” - UN Secretary-General, Ban Ki-moon

Dr Roberto Morales Ojeda, Minister of Public Health, has announced that Cuba will send a medical team of 165 people to Sierra Leone to help in the frontline in the Ebola response efforts.
Ebola Preparedness in India

– Daily MOH press releases
– Regular monitoring: Union level, JMG meetings on Ebola, highest level engagement for intersectoral collaboration
– States alerted, guidance prepared and disseminated; technical support
– Preparedness measures: Points of Entry (18 Airports activated and linked) with screening, isolation facilities; designated hospitals
– Training of Rapid Response Teams
– Health advisory
Summary (1)

• The 2014 Ebola outbreak is unprecedented in scope and threatens global health security.

• Ebola is a serious disease, but in this outbreak the survival rate has been higher than previous outbreaks – 51% of those sickened by Ebola have survived.

• With appropriate measures and concerted actions by all partners, this outbreak can be controlled.
Summary (2)

• The risk of transmission during air travel is low. Ebola is not airborne (i.e. not spread by breathing air)

• Transmission of Ebola requires direct contact with blood, secretions, organs or other body fluids of infected people (living or dead persons) which are all unlikely exposures for the average traveler

• A person who is infected will spread the virus to others only after the infected person starts having symptoms
WHO believes that countries with health systems that are prepared to respond can quickly contain any imported cases.

UN has activated system-wide response to EVD outbreak in West Africa. This outbreak requires global response and continued global attention and action.

The IHR (2005) is designed to strengthen core capacities in countries for response to such public health emergencies.
Thank you