Clinical Care of Ebola Virus Disease

- Screening and Triage
- Clinical Manifestation
- Case Definition
Learning Objectives

• At the end of the session, participants are able to
  – Understand the importance of screening and triage
  – Define a triage, isolation or holding area
  – Conduct rapid identification and assessment of PUI
  – Classify suspect cases and isolate them promptly
  – Identify the symptoms of EVD
Screening for EVD

• Screening for EVD is the first step
• It is simple and based on travel history (since EVD is not in the Philippines)
• “Have you arrived from overseas in the last 21 days?”
• If yes, “Have you been to countries with Ebola in the last 21 days? For example, Guinea, Liberia, Sierra Leone?”
• Any positive reply to this last question and patients are sent for triage.
Who does screening?

• Done by security people at entrance to facility
• Done at entry to ER or outpatient clinics
• Notices around facility
• If person is sick, give them a surgical mask to wear
Triage Area

- All health care facilities **MUST** designate a triage area, which should be located as near as possible to the entrance of the hospital to prevent patients from gaining access to the whole hospital facility.
- It should be separate from the general emergency room to prevent potential transmission of Ebola to other patients and hospital staff.
- The area should have adequate ventilation and room air exchange.

Interim Clinical Guidelines on Severe Acute Respiratory Syndrome (SARS) for Health Facilities in the Philippines
Triage
(Key Principles)

1. Rapid identification and risk assessment of persons with symptoms of Ebola by asking targeted screening questions, which include history of recent travel or close contact with an Ebola case and history of fever or other compatible symptoms

2. Immediate isolation of exposed persons in designated areas with proper infection control precautions

3. Prompt reporting of cases to surveillance units for immediate contact tracing and quarantine measures

Screening or Initial Assessment

- Upon arrival at the triage area
  - Fill up the triage checklist and assess for
    - Travel history to countries with widespread transmission of Ebola in the past 21 days (Liberia, Guinea, Sierra Leone)
    - Exposure history with Ebola patient, dead or sick animals in the past 21 days
    - Symptoms such as
      - Fever (subjective or $T > 38.0 \text{C}$)
      - Headache
      - Weakness
      - Muscle pain
      - Diarrhea
      - Abdominal pain
      - Hemorrhage
## Triage Screening Form

### Annex 2

### Triage Screening Form

<table>
<thead>
<tr>
<th>Last Name:</th>
<th>First Name:</th>
<th>MI:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>Sex:</td>
<td>Occupation:</td>
</tr>
<tr>
<td>Home address:</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Home phone number:</th>
<th>Mobile phone number:</th>
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</table>

### Epidemiological Criteria:

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you travel to any of these countries: Guinea, Liberia, Sierra Leone or Nigeria in the past 21 days?</td>
<td></td>
</tr>
<tr>
<td>In the past 21 days, have you ever cared for, lived with or had direct contact with the bodily fluids such as blood, saliva, sweat of a suspect/probable/confirmed patient with Ebola viral disease (EVD)?</td>
<td></td>
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<tr>
<td>In the past 21 days, did you have close contact with a live or dead individual strongly suspected to have EVD?</td>
<td></td>
</tr>
<tr>
<td>In the past 21 days, did you handle clinical or laboratory specimens (blood, urine, feces, tissues, laboratory cultures) from a live or dead individual or animal known or strongly suspected to have EVD?</td>
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<tr>
<td>In the past 21 days did you receive any intramuscular or intravenous injection in an Ebola outbreak area?</td>
<td></td>
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<tr>
<td>In the past 21 days, did you handle or butcher dead primates; or was involved in drying, smoking or consuming their meat in an EVD outbreak area?</td>
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</table>

### Clinical Criteria:

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Did you have fever (≥ 38°C) in the past 21 days?</td>
<td></td>
</tr>
<tr>
<td>Did you have any of the following symptoms within THE PAST 21 days?</td>
<td></td>
</tr>
<tr>
<td>Headache</td>
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<tr>
<td>Anorexia/loss of appetite</td>
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<tr>
<td>Diarrhea</td>
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<tr>
<td>Abdominal pain</td>
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<tr>
<td>Vomiting</td>
<td></td>
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<tr>
<td>Muscle pain</td>
<td></td>
</tr>
<tr>
<td>Sore Throat</td>
<td></td>
</tr>
<tr>
<td>Drowsiness</td>
<td></td>
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<tr>
<td>Bleeding from any site</td>
<td></td>
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### Assessment:

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<tr>
<th>Physician-on-duty</th>
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</table>
## Guideline in Testing andDisposition of Patients

<table>
<thead>
<tr>
<th>Travel History</th>
<th>Contact History</th>
<th>Any symptom present</th>
<th>Assessment</th>
<th>Testing for EVD</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>+</td>
<td>-</td>
<td>PUI</td>
<td>No</td>
<td>Sent home Monitor for 21 days</td>
</tr>
<tr>
<td>+</td>
<td>-</td>
<td>-</td>
<td>PUI</td>
<td>No</td>
<td>Sent Home Monitor for 21 days</td>
</tr>
<tr>
<td>+</td>
<td>+</td>
<td>-</td>
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DOH’s Interim Guideline on Prevention and Control of Ebola Virus Disease.
Department Memorandum 2014-0257, August 26, 2014
# Guideline in Testing and Disposition of Patients

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</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>+</td>
<td>+</td>
<td>Suspect EVD Case</td>
<td>Yes</td>
<td>Admit to single room Manage Appropriately</td>
</tr>
<tr>
<td>+</td>
<td>-</td>
<td>+</td>
<td>Suspect EVD Case</td>
<td>Yes</td>
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DOH’s Interim Guideline on Prevention and Control of Ebola Virus Disease. Department Memorandum 2014-0257, August 26, 2014
Upon Initial Assessment

- Isolate patient in a single room (holding area) with a private bathroom and door to hallway closed
- Inform assigned staff
- Implement standard, contact and droplet precautions
- Report to NEC or RESU
Isolation/Holding Area

- This is the area where patients wait while transfer to the referral hospital is being coordinated.
- Provide surgical masks to the patients and as much as possible minimize contact with them unless deemed necessary.
- Should be a separate room located near the triage area to ensure quick transfer of suspects and to minimize contact with other hospital patients.
Isolation/Holding Area

The holding area should be:

- Distant from other crowded areas\(^1\)
- Well ventilated / adequate ventilation and room air exchange (negative pressure or independent air-conditioning unit and exhaust or open windows)\(^1,2\)
- Own sink and toilet facilities\(^2\)
- Have adequate sunlight\(^1\)
- Known to everyone in the facility\(^1\)


Entrance to Isolation
Stairs going to isolation room
Antechamber to isolation area
Management

Administer triage screening form

Travel or residing in Ebola affected countries or contact with confirmed case in the last 21 days

Any compatible symptom present?

YES

EBOLA Suspect
Isolate in Holding Area
Admit or transfer to Referral Hospital
Inform NEC or RESU

NO

Send Home
Give home instructions
Monitor symptoms
Inform NEC or RESU

NO

Refer to ER or OPD for appropriate evaluation and management
Annex 5

HOME INSTRUCTIONS for EBOLA VIRUS DISEASE PATIENTS UNDER INVESTIGATION (TRAVEL HISTORY/ASYMPTOMATIC PATIENTS)

You are considered to be an Ebola Virus Disease patient under Investigation because of your travel history and/or history of exposure to a known suspect/probable/confirmed case. However, because you HAVE NO SYMPTOMS AT THE MOMENT, you are not considered contagious and thus will be sent home for home quarantine. You are advised to do the following at home.

1. Monitor and record your temperature twice daily for 21 days
2. Observe for fever and other symptoms listed below. Report AT ONCE to the Health Emergency Bureau TEL# 6517800 local 2930 or the Health Emergency Management Bureau TEL# 6517800 local 2206-2207 if any of these occur.
   - Headaches
   - Anorexia/loss of appetite
   - Drowsiness
   - Sore throat
   - Aching joints or muscles
   - Difficulty in breathing
   - Vomiting
   - Diarrhea
   - Abdominal pain
   - Difficulty swallowing
   - Bleeding from gums
   - Bleeding into skin (purpura)
   - Bleeding into eyes and urine
   - Hiccups
3. Remain at home and avoid crowded places
4. Do not travel by commercial conveyances (e.g. airplane, ship, long-distance bus, or train) or use public transportation such as jeepney, bus, taxi
5. Practice hand hygiene at all times, in particular before and after eating and before and after bathroom activities.
6. Isolate yourself from any family members immediately if you develop any symptom.
7. Avoid contact with family members such as hugging, kissing, laying of hands should be done.
8. Immediately place all used clothes and linen in a plastic bag if you develop fever and/or any symptom. DO NOT dispose this by yourself. Inform RESU regarding its disposal.
9. You may be monitored by the Department of Health personnel.

I fully understood the home advice instructions and I agree to abide on them.

__________________________________________________________ 
Name and Signature of Patient

__________________________________________________________ 
Name and Signature of Nurse/Resident/Fellow

Date: ___________________________ Date: ___________________________
HOME INSTRUCTIONS for EBOLA VIRAL DISEASE PATIENTS UNDER INVESTIGATION
(TRAVEL HISTORY/ASYMPTOMATIC PATIENTS )

- Monitor and record your temperature twice daily for 21 days
- Observe and immediately report to NEC TEL# 6517800 loc 2930 or the Health Emergency Management Bureau TEL# 711-1001 to 1002 the first time you have any signs and symptoms of ebola infection
- Remain at home and avoid crowded places
- You should not travel by commercial conveyances (e.g. airplane, ship, long-distance bus, or train) or use public transportation such as jeepney, bus, taxi
- Practice hand hygiene at all times
- Isolate yourself from any family members once with symptoms.
- Avoid contact with any family member such as hugging, kissing
- Place all used clothes and linen in a plastic garbage bag once symptomatic. DO NOT dispose this by yourself. Inform NEC regarding its disposal
- You maybe monitored by the Department of Health

RITM 's Interim Guideline on the Management and Prevention of EBV, 2014
PERSON UNDER INVESTIGATION (PUI)

- Any person arriving in the Philippines from any of the following countries in West Africa, namely: Guinea, Liberia, Sierra Leone in the past 21 days

  OR

- Contact of probable or confirmed cases

Definition of a Contact

- Anyone who presents with signs and symptoms within 21 days of exposure to a person known to be a SUSPECT/PROBABLE/CONFIRMED EVD case in at least one of the following ways:
  - slept in the same household with a case
  - direct physical contact with the case (dead or alive) during illness
  - direct physical contact with the dead case at the funeral
  - has touched his/her blood or body fluids during the illness
  - has touched his/her clothes/linen during the illness;
  - for infants, has been breastfed by the patient

- Any person working in a laboratory who has direct contact with specimens collected from either an EVD patient or animal OR in a hospital where EVD cases are being treated.
What to do When a person is a PUI

- Place a **mask** on the patient
- **Move** patient to a designated area away from other patients and staff and **isolate** immediately!
- **Notify** the appropriate staff to perform further assessment
- **PPE** (Contact and Droplet) must be worn by any one entering the room
- If the patient was vomiting, has diarrhea, or is bleeding, secure any soiled area so it is separate from any other patients or staff until it can be decontaminated appropriately

Source: WHO, 2014
SUSPECT CASE

• A PUI who develops signs and symptoms during the 21-day quarantine period

OR
SUSPECT CASE

• Any person with sudden onset of high fever or any of the following symptoms
  a. Headache
  b. anorexia/loss of appetite
  c. Lethargy
  d. sore throat
  e. aching joints or muscles
  f. difficulty in breathing
  g. Vomiting
  h. diarrhea
  i. abdominal pain
  j. difficulty of swallowing
  k. bleeding from gums
  l. bleeding into skin (purpura)
  m. bleeding into eyes and urine
  n. hiccups

AND

• With epidemiologic risk factors within the past 21 days before the onset of symptoms such as contact with blood or other body fluids or human remains of a patient known to have or suspected to have EVD; residence in –or travel to- an area where EVD transmission is active; or direct handling of bats, rodents, or primates from disease-endemic areas
Probable Case

- Any suspected case evaluated by a clinician/epidemiologist having an epidemiological link with a confirmed case (where it was possible to collect specimen for laboratory confirmation) OR
- Any deceased suspected case (where it was not possible to collect specimen for laboratory confirmation) having an epidemiological link with a confirmed case.
Confirmed Case

A suspected or probable EVD case with laboratory confirmation of infection with ebola
Symptoms of Ebola Virus Disease (1)

- Initial symptoms are nonspecific and may include fever, chills, myalgia and malaise
- Patients can progress to develop gastrointestinal symptoms
  - Severe watery diarrhea, nausea, vomiting, abdominal pain
- Other symptoms include:
  - Chest pain, shortness of breath, headache or confusion, conjunctival injection, hiccups, seizures or cerebral edema
Symptoms of EVD (2)

• The most common symptoms reported during the current outbreak are
  – Fever (87%)
  – Fatigue (78%)
  – Vomiting (68%)
  – Diarrhea (66%)
  – Loss of appetite (65%)

• Patients with fatal disease develop more severe clinical signs early and die between 6 and 16 days of complications (mean 7.5 days)
Symptoms of EVD (3)

- Bleeding is not universally present but can manifest later as petechiae, ecchymosis, bruising or oozing. Frank hemorrhage is less common.
- Some patients develop diffuse maculopapular rash that can desquamate.
- In nonfatal cases patients may have fever for several days and improve within 6 days.
- The case fatality rate in West Africa is about 50%.