Surveillance System in the Philippines
Outline

1. Brief Background Information
   IHR
   Surveillance Systems in the Philippines

2. Surveillance and Response for EVD
Our world is changing as never before

Populations grow and move...

Microbes adapt...

Public health risks increase...

Diseases travel fast...

Health security is at stake
International Health Regulations (2005)

A global legal instrument for global public health security

Came into force on 15 June 2007*

Preventing the international spread of disease while avoiding unnecessary interference with international transport and trade

Legally binding for 194 countries and WHO that have agreed to play by the same rules to secure international health.
New IHR – New obligations

Designation of responsible authorities
Functional national IHR Focal Points
Consultations, notification, verification, information sharing
Assessment and public health response

**Strengthening of the core capacity for surveillance & response**

Points of entry
- core capacity
- Public health measures
- health documents (Ship Sanitation Control Certificate...)
- Charges

Collaboration and assistance

Human rights, including treatment of personal data
Transport and handling of biological substance and materials

IHR Expert Roster, Emergency/Review Committee

Other legal aspects: rejection/reservation, disputes etc
IHR requirements on POE

**Prevention (routine)**
- Access to medical service
- Transport of ill travellers
- Inspection of conveyances
- A safe environment for travellers
- Control of vectors / reservoirs

**Emergency Preparedness and Response**
- *Public Health Emergency contingency plan*
- Arrangement for treatment and isolation
- Arrangement for interview / quarantine
- Apply specific control measures
IHR Definition of “PHEIC”

- PHEIC - “Public health emergency of international concern” means an extraordinary event which is determined, as provided in these Regulations:

  (i) to constitute a public health risk to other States through the international spread of disease

  AND

  (ii) to potentially require a coordinated international response
Four criteria for assessment

- Is the public health impact of the event serious?
- Is the event unusual or unexpected?
- Is there a significant risk of international spread?
- Is there a significant risk of international travel or trade restrictions?

* Answering "yes" to any two of the criteria requires a country to notify WHO*
Determination of a PHEIC

- Director-General of World Health Organization will determine whether an event constitutes a PHEIC

- Five criteria to consider:
  - Information from the country
  - The decision instrument
  - Advice of the Emerging Committee
  - Scientific principles
Statement on the 3rd meeting of the IHR Emergency Committee regarding the 2014 Ebola outbreak in West Africa

• It was the unanimous view of the Committee that the event continues to constitute a Public Health Emergency of International Concern (PHEIC).

• The Committee reiterated its recommendation that there should be no general ban on international travel or trade

• Recommendations for States with intense Ebola transmission (Guinea, Liberia, Sierra Leone) States should maintain and reinforce high-quality exit screening of all persons at international airports, seaport, and major land crossings, for unexplained febrile illness consistent with potential Ebola infection

• Other details http://www.who.int/mediacentre/news/statements/2014/ebola-3rd-ihr-meeting/en/
Surveillance Systems in the Philippines

- Indicator based - PIDSR
- Event-based – ESR, SPEED
Trigger events for strengthening Surveillance

Trigger Events

- Emerging diseases (e.g., SARS, Avian Flu)
- Philippine ESR Assessment 2006
  - "Inadequate surveillance and response"
- New IHR Requirements (International Health Regulations of 2005)
- Asia-Pacific Strategy for Emerging Diseases (APSED)
What is PIDSR

“PIDSR is an enhanced surveillance system that monitors notifiable diseases and other health-related events of public health importance utilizing an integrated approach.”
Components of PIDSR

- Case-based/Indicator-based
  - a. ESR
  - b. SPEED
Conceptual Framework for the Philippine Integrated Disease Surveillance and Response (PIDS)
Category 1 – Immediately reportable diseases/syndromes/events

1. Acute flaccid paralysis “hot case”
2. Anthrax
3. Human avian influenza
4. Severe acute respiratory syndrome (SARS)
5. Adverse event following immunization (AEFI)
6. Any disease outbreak
7. Any clustering of patients with similar disease, symptoms or syndromes
8. Meningococcal disease

Immediate reporting upon laboratory confirmation

1. Poliomyelitis
2. Cholera
3. Measles
4. HIV/AIDS (HIV Registry)
1. Acute bloody diarrhea
2. Acute hemorrhagic fever syndrome
3. Acute viral hepatitis
4. Acute flaccid paralysis
5. Bacterial meningitis
6. Cholera
7. Dengue
8. Diphtheria
9. Influenza
10. Japanese encephalitis
11. Leptospirosis
12. Malaria
13. Neonatal tetanus
14. Non-neonatal tetanus
15. Paralytic shellfish poisoning
16. Pertussis
17. Rabies
18. Typhoid and paratyphoid fever
Figure 4: Flow of Weekly Reporting of Notifiable Diseases

1. Cases from the Community
   - Barangay Health Stations (BHS)
     - Rural Health Units and City Health Offices in non-chartered cities
       - Provincial Epidemiology and Surveillance Units (PESU)
         - Regional Epidemiology and Surveillance Units (RESU)
           - National Epidemiology Center
     - City Epidemiology and Surveillance Units (CESU) in chartered cities
       - Cases from local hospitals, clinics, ports, airports

2. Cases from local hospitals, clinics, ports, airports
3. Cases from provincial and district hospitals, ports, airports
4. Cases from referral hospitals, laboratories, ports, airports
5. Cases from level 3 and retained hospitals, ports, airports
Event-based Surveillance & Response (ESR)

- Complements existing indicator-based disease surveillance (PIDSR) in detecting IHR events with added advantage of rapid reporting, greater geographic spread & relatively low cost
- Can be rumours & other reports transmitted through routine reporting system or reports from media, health workers & NGOs
- Reports may be formal or informal through phone calls or text messages
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<td>Start date</td>
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<td>6</td>
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| 7 | Description of cases | Case A:  
- 44 years old, Male  
- From Liberia and arrived in the Philippines on September 19, 2014  
- Asymptomatic  
- Consulted at RITM on September 19, 2014  
- Address: 36 Sapang, Manaoag, Pangasinan  
Case B:  
- 48 years old  
- From Ivory Coast, West Africa and arrived in the Philippines on September 20, 2014  
- Asymptomatic  
- Consulted at RITM on September 23, 2014  
- Address: Palao, Calamba, Laguna |
| 8 | Number of deaths | 0 |
| 9 | Description of deaths | N/A |
| 10 | Is this an outbreak? | ☑ Yes ☐ No |
|   | If yes, who made the announcement? | NEC-DOH ☐ RESU-CHD ☑ CHO/PHO |
|   | Others, specify: |   |
|   | Was a report made? | ☑ Yes ☐ No |
| 11 | Status of health event | Controlled |
| 12 | Actions taken | - RITM surveillance unit validated report with ROD.  
- Coordinated with ICC nurse regarding relevant details about the case.  
- RESU NCR reported event to NEC.  
- RESU NCR referred the case to Region 4A and Region 1 for surveillance. |
| 13 | Assessment | PHENC* |
| 14 | Assistance needed | None |
| 15 | Remarks |   |
| 16 | Laboratory results | None |
| 990 | ESRU Action | To continue monitoring |
| 991 | Who has been informed? | PHSID-NEC, NCDPC, WHO and HEMS |
| 992 | Source(s) of information | Glenelvyn Grace V. Infante, RN – Surveillance Nurse, RITM |
Surveillance in Post Extreme Emergencies and Disasters (SPEED)

Objectives

1. Detect early unusual increase of communicable and non-communicable conditions related to emergencies and disasters

2. Monitor health trends for appropriate public health action

3. Enable identification of appropriate response to handle the emergency
Link between surveillance and response

Event based surveillance
- Rapid Detection, Notification, Verification, Assessment of Public Health Events e.g.
  - Clusters of disease
  - Rumors of unexplained deaths
Commonly
  - Immediate reporting

Indicator based surveillance
- Routine reporting of cases of disease e.g.
  - Notifiable disease surveillance systems
Commonly
  - Health care facility based
  - Weekly, Monthly reporting

Response
- Linked to surveillance
- National and sub national capacity to respond to alerts
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**RAPID ASSESSMENT**

- Early Warning System
- SPEED

- Activated
- Deactivated
Ebola Virus Disease
Surveillance and Reporting
Possible points of detection of EVD cases

- National surveillance systems should be capable of detecting suspected cases
- Clinicians and health care workers understand and implement:
  - EVD case definition
  - Safe specimens collection and shipment for laboratory confirmation
  - Reporting mechanism, including IHR notification to WHO

Source: WHO
Case Definition

A. Person Under Investigation (PUI):

Any person arriving in the Philippines with history of travel within the past 21 days or residence in EVD outbreak affected countries including Guinea, Liberia, Sierra Leone, and Nigeria*

OR

Contacts of confirmed cases.
Case Definition

B. Suspect Case:

B.1 A PUI who develops signs and symptoms during the 21-day quarantine period.

OR

B.2 Any person with acute onset of fever with at least any three of the following:

- Headache
- Vomiting
- Anorexia / loss of appetite
- Bloody diarrhea
- Lethargy
- Hiccups
- Stomach pain
- Aching muscles or joints
- Difficulty swallowing
- Breathing difficulties
- Bleeding from gums
- Bleeding into skin (purpura), eyes and urine

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.
D. Laboratory Confirmed Case

Any suspect or probable cases with a positive laboratory result. Laboratory confirmed cases must test positive for the virus antigen, either by detection of virus RNA by reverse transcriptase-polymerase chain reaction (RT-PCR), or by detection of IgG and IgM by Enzyme-Linked Immunosorbent Assay (ELISA) or IgM antibodies directed against Ebola.

E. Discarded Case

Any suspected or probable case with a negative laboratory result. “Discarded Case” showed no specific antibodies, RNA or specific detectable antigens.
EVD Surveillance Procedure

1. All PUI and EVD cases (suspect, probable or laboratory confirmed) should be reported within 24 hours to the National Epidemiology Center using properly filled-out case notification forms (Annex A).

2. The reporting entity (Epidemiology Surveillance Unit, hospitals/health facilities or responsible person(s)) shall ensure proper and complete notification while observing privacy and confidentiality on all information gathered for this purpose.

3. All suspect or probable cases warrant collection of appropriate specimens by trained, skilled health provider for immediate laboratory testing using standard infection control precautions.
4. Results of tests should be immediately available to the PUI or patient, the reporting unit and the National Epidemiology Center.

5. The National Epidemiology Center and reporting entities should keep separate records of all cases in secured formats.

6. Regular and immediate reporting to the Secretary of Health or other designated authority shall be made by the National Epidemiology Center.

7. Announcement to the public is made only after approval of the Secretary of Health or thru the Secretary of Health.

8. Hospital dissemination of any information is made thru the head of health facility or thru the hospital infection control committee where applicable.

9. The Case Investigation Form and laboratory request form of the Research Institute for Tropical Medicine (Annex B&C) shall be used for all investigations of suspected cases. Failure to provide this forms would result in non-acceptance of the specimen brought to RITM.
Roles of Hospitals and Other Health Facilities

1. Orient or re-orient hospital/health facility staff regarding mandatory disease reporting requirements if necessary.

2. Designate disease surveillance coordinators who will be responsible for preliminary investigation of suspected cases seen at the hospital, as prescribed by the PIDS guidelines.

3. Prepare communication system, such as directory of referral hospitals and NEC-ESR, for reporting and referral of suspected Ebola Virus cases.
EVD Surveillance

PUI EVD Cases

Submit Case Notification Form w/in 24 hrs → NEC

PUI EVD suspect/probable

Collection of specimen → RITM

Fill out & submit Case Investigation Form & Laboratory Request Form

2 days → Release of results to PUI/patient. Reporting Unit, NEC
Surveillance Flow Chart
Control the outbreak

- National leadership and risk communication
- Outbreak control measures to stop transmission:
  - Clinical Management and IPC
  - Epidemiological investigation, surveillance and laboratories
  - Behavioral and social interventions
  - Logistics
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

**Coordination**
- Medias
- Logistics
  - Security police
  - Lodging food
  - Social and epidemiological mobile teams
  - Finances salaries
  - Transport vehicles

**Psycho-social support**
- Triage in/out

**Clinical case Management**
- Barrier nursing
- Organize funerals
- Clinical trials ethics committee
- Duty of care research
- Active case-finding
- Follow-up of contacts

**Epidemiological investigation, surveillance and laboratory**
- Control of vectors and reservoirs in nature
- Search the source
- Database analysis
- Specimens Laboratory testing

**Ethical aspects**
- Behaviours and social interventions
- Legal and ethical perspectives

**Infection control**
- Social and epidemiological mobile teams
- Finances salaries
- Transport vehicles
- Security police
- Lodging food
Why do we need to prepare?

- Past experiences clearly demonstrated that emerging diseases/events will continue to occur...

- Emerging diseases are unpredictable in the changing world...

- **Effective preparedness planning definitely minimize the impact on health, economic and social disruption**
Thank You