Lessons Learned in Leptospirosis Surveillance and Response After a Natural Disaster

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Outline

• Background: Philippine Integrated Disease Surveillance and Response (PIDSR)
• Aftermath of Flooding and Destruction after Twin Typhoons
• Post-disaster Disease Surveillance
• National outbreak response
• GOARN mission
• Lessons learned
• Way Forward
PIDSR Framework

Local Disease Surveillance and Response Module
- Sensors: Hospitals, clinics, labs., media, community etc
- MESU/DESU
- PESU/CESU
- Information
- Response (LGU)
- Support (LGU)

National Disease Surveillance and Response Module
- Sensors: Tertiary hospitals, national reference labs.
- RESU
- NEC
- Information
- Support (Regional)
- Support (National)

Diseases
Epidemics
Other public health threats

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Endemic Leptospirosis

Leptospirosis, By Month Philippines, 2005-Aug 2009

NO. of CASES

J F M A M J J A S O N D 2005
F M A M J J A S O N D 2006
F M A M J J A S O N D 2007
F M A M J J A S O N D 2008
F M A M J J A S O N D 2009

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26 September 2009
Typhoon Ondoy
(Ketsana)

2 October 2009
Typhoon Pepeng
(Parma)

2009 Twin Torrents

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Aftermath: widespread flooding
over 9 million people affected
disruption of local health services
Aftermath: Leptospirosis outbreak with high case fatality rate

Leptospirosis, Philippines
Morbidity Week 1-41, 2009, as of Oct. 15, 2009
### International Health Regulations (2005): Annex 2

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Risk</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Serious</td>
<td>YES</td>
<td>Increasing number of deaths; surge capacity threatened</td>
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<tr>
<td>Unusual or unexpected</td>
<td>NO</td>
<td>Leptospirosis expected after flooding; CFR within universal range</td>
</tr>
<tr>
<td>International spread</td>
<td>NO</td>
<td></td>
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<td>Interference with travel or trade</td>
<td>NO</td>
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Request for GOARN Support

Scope of Work

1. Provide guidance on clinical aspects of Leptospirosis including investigations of suspect deaths
2. Improve laboratory capacity for early detection and diagnosis
3. Develop strategies for risk communication
4. Strengthen post-disaster surveillance
5. Recommend public health control measures

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Important Lessons Learned

• Implement post-disaster surveillance for early detection of outbreaks
• Anticipate that international assistance is an option to maximize response efforts
• Understand that surge capacity is a significant determinant of health outcomes
• Consider that desperate measures to prevent spread may fail because of operational inefficiency
Carrying the Lessons Forward

Disaster Surveillance

• Assess surveillance implementation
• Harmonize post-disaster surveillance systems
• Build laboratory capacity
Carrying the Lessons Forward

Outbreak Response

• Train rapid response teams
• Foster zoonoses collaboration
• Develop Guidelines on Surge capacity