Leptospirosis control and prevention in Henan province, China

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Background

- Leptospirosis is a bacterial zoonotic disease caused by Leptespiro.
- The infection is commonly transmitted to humans by water that has been contaminated by animal urine.
- Rats, mice are important primary hosts, other mammals including dogs, cows, pig are hosts.
- Symptoms of leptospirosis include high fever, severe headache, chills, muscle aches, and may include jaundice, red eyes, hemorrhage.
Epidemic curve of leptespiroiosis in Henan province

Policy making in 1992
Policy was implemented from 1993

Research and surveillance from 1991
Outbreak was first reported in 1991

Morbidity reduced from 1994
Policy of Leptospirosis control in Henan province

- **Purpose**
  - Reduce the mortality and morbidity of leptospirosis in affected area
  - Improve economic growth and health development

- **Activities**
  - Education to people
  - Training to health workers
  - Vaccine to high risk population
  - Deratization
  - Evaluation of policy effective
Persons to be benefited in leptespirosis control

- Farmer and fisherfolk live in epidemic area
- Traveller into epidemic area from other area
- Members of the affected family and so on
- Local CDC staffs
- Hospital and clinic staffs
- Government official, businessman and so on
- Provincial CDC staffs
- Provincial health bureau staffs
Organisational structure of leptospirosis control and prevention in Henan province, China
Model can be used for policy making

- Punctuated equilibrium model
  - Research and surveillance after outbreak of leptespirosis in 1991

- Stage model
  - Identifying problem
  - Research and surveillance
  - Policy suggestion
  - Consultation
  - Policy making
  - Policy implemented
  - Evaluation
Scoping of policy for leptespirosis control

- Provincial health bureau (leader, staffs)
  - Conference, suggestion report
  - Communicate and persuade

- Director and staffs of provincial CDC

- Local government official (leader)
  - maybe did not understand the significance of the policy
  - Communication

- Local CDC leaders and staffs
- Doctors of local hospital and clinic
- Agriculture department leaders and staffs
Bounding of policy for leptospirosis control

- Political support by provincial and local government (including provincial health bureau staffs, local health bureau staffs, town chief, village chief) is necessary
- Financial support by provincial government
- Leptospirosis could be controlled by provincial CDC and local CDC
- Leptospirosis was expected to be controlled within 2-4 years
Problem frame of Leptespirosis control

➢ Severity extent
  - Only several hours from onset to death in serious case
  - Higher mortality and morbidity
  - Threat to the case’s family and society

➢ Effects
  - Many person could be infected or died if leptospirosis did not be control

➢ Achievement
  - The government official will get rewards when leptespirosis be control
  - Only a few financial budget was need
Taking values into account

- The policy making is based on science research and systematic surveillance.
- The duty of CDC staffs is to protect health of the people.
- If the policy suggestion be adopted by government, then many life could be saved.
- Avoid more economic loss.
Which differences to harness and manage

➤ Harness

● Research focus in the biological study such as epidemiology, clinic symptom.

● Research is basis of policy making and the effect of policy implement can be used to evaluate research.

➤ Manage

● Policy maker always always hope spend a little money to control infectious

● CDC staffs always hope get much more money to control disease, so CDC staffs must be pay attention to have good communication with policy maker
How, by whom and when?...

HN CDC (director of zoonosis department)
1. Write report about the situation and policy suggestion after research
2. Discuss with CDC director
3. Meeting with health bureau

HN CDC (director)
1. Discuss with specialist
2. Sent report to health bureau
3. Meeting with health bureau

Health bureau (director of infectious control department)
1. Discuss with specialist
2. Discuss with CDC
3. Making policy
Context of leptespirosis control(1)

- Overall contextual factors
  - There was no policy of leptespirosis control
  - Local CDC found the outbreak and reported to provincial CDC
  - Provincial CDC took Surveillance and research
  - Director of CDC and Health bureau played key role

- Legitimacy
  - Director of CDC gave financial and staff support for research
  - Department of Health provided financial support
Context of leptespirosis control (2)

- Organisational barriers and facilitators
  - Both CDC and health bureau facilitated research and policy
  - As it was an emergency hence no one resisted
Outcomes

- Morbidity of leptospirosis reduced in 3 years
- Most of people in infected area know knowledge of leptospirosis prevention through education
- Capacity of health system strengthened
  - Capacity of field epidemiology investigation improved
  - Surveillance system established and intensified
  - Local CDC and hospital staffs trained
  - Local CDC laboratory strengthened
- Change the behavior of people still needs to be worked
Thank you for your attention