Rabies in Asia
Successful examples of rabies control

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Rabies in Asia

- Globally almost all human deaths caused by rabid domestic dogs
- Approximately 90% occur in Asia
- Over 3 billion people live in 15 countries in Asia that are endemic for dog rabies
- Human deaths estimate – 20,000 or 6 per million population
- Over 10 million postexposure prophylaxis

Rabies among Asian Children

More than 40% - seeking treatment for dog bites and those dying of rabies are children less than 1.5 yrs old

More than 3 billion people in developing countries in Asia potentially exposed to rabies

Human Rabies in Asia, 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th># Cases</th>
<th>Rate/mil</th>
<th># PEP</th>
<th>Rate/ mil</th>
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</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>2010</td>
<td>2,000</td>
<td>15</td>
<td>~150,000</td>
<td>2,000</td>
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<tr>
<td>Bhutan</td>
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<td>12,200</td>
<td>~5,500,000</td>
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<tr>
<td>Cambodia</td>
<td>2007</td>
<td>6</td>
<td>0.5</td>
<td>~22,000</td>
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<tr>
<td>China</td>
<td>2007</td>
<td>22,000</td>
<td>0.1</td>
<td>~22,000,000</td>
<td>2,000</td>
</tr>
<tr>
<td>India</td>
<td>2007</td>
<td>20,000</td>
<td>0.1</td>
<td>~2,000,000</td>
<td>1,000</td>
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<tr>
<td>Indonesia</td>
<td>2007</td>
<td>116</td>
<td>0.5</td>
<td>~12,000</td>
<td>2,000</td>
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<td>Laos</td>
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<td>~100</td>
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<td>~160/yr</td>
<td>~100</td>
<td>~1</td>
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<td>Nepal</td>
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<td>990</td>
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<td>~6,000</td>
<td>400</td>
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<td>Sri Lanka</td>
<td>2007</td>
<td>59</td>
<td>2.6</td>
<td>~3,000</td>
<td>950</td>
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<td>Thailand</td>
<td>2007</td>
<td>8</td>
<td>0.1</td>
<td>~600,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2007</td>
<td>89</td>
<td>1</td>
<td>~600,000</td>
<td>6,000</td>
</tr>
</tbody>
</table>

*PEP - postexposure prophylaxis
Human and Animal Rabies in Asia

Country Year* Human Dog Cat Wildlife
Bangladesh 08 2000 + ND +
Bhutan 08 sporadic + ND -
Cambodia 10 2 + + -
China 10 2009 + + +
India 08 20,000 + + +
Indonesia 10 0 + + -
Lao PDR 10 206 + + -
Malaysia 10 0 + ND -
Mongolia 08 2 + ND -
Myanmar 08 59 + + -
Nepal 08 32 + ND -
Pakistan 08 2490 + + +
Philippines 10 0 + + -
Sri Lanka 10 59 + + +
Thailand 10 26 + + -
Viet Nam 10 30 + + -

Table 1. Historical data collected from national reports, 2008-2010

Regional human and animal rabies occurrence and status of certain animal disease control measures, 2011 (Data sources: Ministries of Health, WHO SEARO, OIE WAHID)

Country Reported Number of Human Cases Rate Per Million Population Per Year Presence of Dog Rabies Rabies Notifiable to the OIE General Surveillance and Monitoring Dog Vaccination Programmes
Bangladesh 0 0 No Yes Yes Yes Yes
Cambodia 800* 56 Yes No No No No
Indonesia 116 0.48 Yes Yes Yes Yes Yes
Lao PDR 1 0.16 Yes Yes Yes No Yes Yes
Malaysia 0 0 No Yes Yes Yes Yes Yes
Myanmar 1000* 21 Yes Yes No No Yes Yes
The Philippines 168 2 Yes No Yes No Yes Yes
Singapore 0 0 No Yes Yes Yes Yes Yes
Thailand 8 0.12 Yes Yes Yes Yes Yes Yes
Viet Nam 89 1 Yes Yes Yes Yes Yes Yes

*estimated only
**targeted surveillance only

Human and Animal Rabies in ASEAN Countries, 2011

Sources: Ministries of Health, WHO and OIE

Country Reported No. of Human Cases Rate per Million Population per Year Presence of Dog Rabies Comments
Brunei 0 0 Historic ly rabies free
Cambodia 800* 56 Yes
Indonesia 116 0.48 Yes
Lao PDR 1 0.16 Yes last case among domestic animals in 1999
Malaysia 0 0 No last case among domestic animals in 1999
Myanmar 1000* 21 Yes
Philippines 208 2 Yes
Singapore 0 0 No last case among domestic animals in 1953
Thailand 8 0.12 Yes
Viet Nam 89 1 Yes

Initiatives for the control and eventual elimination of rabies in Asia

ASEAN Rabies Initiatives

A Regional Workshop on Information Sharing on Rabies Prevention and Control, in Halong, Viet Nam in 2008 resulting in:

- Strengthening Cooperation and Information Sharing on Rabies among ASEAN Plus Three Countries
- 23-25 April 2008, Halong, VIET NAM

CALL FOR ACTION
Towards the Elimination of Rabies in the ASEAN Member States and the Plus Three Countries

Endorsed by the ASEAN Ministers of Health and Agriculture
Follow up regional consultations in 2012 (Chiangmai, Thailand) & 2013 (Vietnam)
Bohol, Philippines Rabies Project

- Three-year rabies prevention and control program initiated in 2007
- Demonstrated that rabies can be eliminated and children saved by:
  - Empowering communities to take responsibility
  - Mobilize local resources
  - Developing and sharing adequate tools for sustainability


CARc PROJECT
Children Against Rabies

- Launched in 2011 in El Nido, Palawan
- Conducted by GARC and the Department of Health, supported by Sanofi Pasteur
- ≈ 5,000 children aged 5-15 years were given pre-exposure prophylactic immunization
- Schools taught the children about rabies prevention and responsible pet ownership
- Estimated USD 32k spent on PreP will be recouped in 5 years in savings from providing less postexposure vaccinations

GARC CARE Projects
Communities Against Rabies

CARE Expansion Sites

- Nias
  - 750k people
  - 45k dogs

- Ilocos Norte
  - 547k people, 75k dogs

- Sorsogon
  - 709k people, 64k dogs

- Metro Manila
  - 690k people, 35k dogs
  - (Cross border Marikina & Cainta)

Dog Rabies Elimination Campaigns

Program components:
- prevention of dog bites and human rabies
- establishment of sustainable diagnostic and surveillance systems
- elimination of rabies in dogs
- community awareness and mobilization
- integration of rabies prevention and responsible dog ownership into child education programs

Crossborder Strategies

- challenge of implementing dog rabies elimination program in contiguous and cross border areas - constant risk of re-introduction of cases from neighboring endemic areas
- mutually agreed strategies must be in place to have a harmonized institutional operational framework
- cross border rabies control once successful will geographically expand rabies-free areas
**CARE PROJECT Updates**

- Launched in 2012 in the Philippine project sites
  - Updated and corrected the underestimation of target dog population by improving dog population data collection
  - Increased 1st year vaccination coverage to >60% from baseline of <20%
  - Baseline community KAP surveys and animal welfare assessments done
  - Launched media advocacy workshops to increase involvement of media in public awareness campaigns
  - Promoted curriculum integration on dog bite and rabies prevention and responsible pet ownership among public grade schools
  - Baseline community KAP surveys and animal welfare assessments done
  - Launched media advocacy workshops to increase involvement of media in public awareness campaigns
  - Increased 1st year vaccination coverage to >60% from baseline of <20%
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  - Increased 1st year vaccination coverage to >60% from baseline of <20%
  - Baseline community KAP surveys and animal welfare assessments done
- Published our 3rd regional edition of the teachers’ manual in Ilocos
- Improved and increased access to animal bite treatment centers
- Created positive externalities to adjacent local government units (province, municipalities, cities) who are becoming more aware of rabies education campaigns from our projects (radio, TV, billboards along major crossroads, thus increasing the demand for rabies control activities from their local governments
- Launched in Sept 2013 in the Indonesian project site
  - Starting with stakeholder engagement, and community consultations and immersion

**Issues with Rabies Control in Asia**

**Weaknesses**

- Insufficient surveillance systems
- Limited access to modern rabies vaccines
- Lack of public awareness
- Inadequate political commitment

**Opportunities**

- Modern safe and efficacious vaccines
- Increasing number of patients receiving PEP
- More support of civil society, private sector and government-sponsored initiatives
- Securing contributions from other sectors including local government, education, environment, animal welfare, tourism etc

**Surveillance & data collection**

**Issues and concerns**

- Diversity of data sources
  - Public health and veterinary services
  - Some private/NGO initiatives
- Format of reporting not harmonized
- Mechanism of feedback to countries and appropriate timely response in case of increasing numbers and outbreaks
- Lack of timeliness in reporting data
- Need to improve diagnostics and laboratory-based surveillance especially for animal rabies

**Towards Regional Rabies Elimination**

- Strong advocacy for global awareness
- Need to increase rabies surveillance
  - Collection of national, regional and global data
  - Should include both human and animal cases plus data on rabies exposures and human post-exposure prophylaxis, and dog bite injuries
- Need to improve laboratory diagnosis and increase laboratory-based surveillance