Rabies control initiative in Tamil Nadu, India: a test case for the ‘One Health’ approach

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Need for Systems Thinking for Rabies Control

- Human resource capacity challenges
  - An average medical student/graduate knows only 40-60% of what is needed

- Lack of evidence based planning
  - Only 263 rabies deaths reported; ‘Zero’ deaths in 18 states

- Research-Policy disconnect
  - Lack of health systems and policy relevant research on rabies
Study Background

- No consensus among national policy makers on coordination mechanisms for rabies control in India
- Tamil Nadu first state to implement population level interventions to control rabies
- WHO commissioned PHFI to assess the interventions following reports of decreasing rabies incidence
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<th>Department</th>
<th>Data reported</th>
<th>Catchment area</th>
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<td>Dog bites by district by year</td>
<td>Rural TN (PHC and Block PHC)</td>
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<td>Rabies cases/ deaths by district by year</td>
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<td>District census data</td>
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<td>Rural and urban TN (Taluka &amp; District Hospitals)</td>
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<td>Department of Animal Husbandry (DAH)</td>
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<td>Vaccine consumption by district by year</td>
<td>Rural and urban TN (by health facility at all levels)</td>
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Major Milestones in Rabies Control in TN

1999
- Licensing of dog rules

2004
- Ban on use of Neural tissue vaccine
- Introduction of Tissue Culture Vaccine

2006
- Ban on stray dog killing
- Increased dog population
- Strong public pressure

2007
- ABC-AR Pilot project launched
- Introduction of Intradermal ARV for humans

2008
- Scale up of ABC-AR to all Corporations/Municipal areas of Tamil Nadu
Interventions for rabies control

**Human Interventions**
- Surveillance
- Anti Rabies vaccination
- Antibody provision
- Community Awareness

**Animal interventions**
- Animal Birth Control – Anti Rabies Vaccination
- Licensing of dogs
- Community awareness
- Livestock census

**Environment interventions**
- Waste disposal system

**Systems Intervention**
- Procurement and Supply Chain Management System
Intersectoral coordination mechanism

**State level coordination**
- **Planning & Implementation**
  - Public Health Directorate
  - Municipal Administration
  - Town Panchayats
- **Information sharing**
  - Public Health Surveillance
  - Municipal Dog Surveys & DAH Livestock Census
- **Health services:**
  - Animal and human
  - Health Dept.
  - Municipal Administration, Animal Husbandry Dept.
- **Oversight**
  - Animal welfare bodies
  - Civil Society Organizations

**District level coordination**
- **Implementation**
  - Public Health Directorate
  - Municipal Administration
  - Town Panchayats
- **Information generation**
  - Public Health Surveillance
  - Municipal Dog Surveys & DAH Livestock Census
  - Best practices
- **Awareness**
  - Public awareness and resource mobilization
  - Communicate guidelines to breeders
- **Oversight**
  - Animal welfare bodies
  - Civil Society Organizations
Reported number of dog bites (DPH) and vaccine consumption (TNMSc)

- Annual dog bites incidence per 100,000 rural population in TN
- No. of vials consumed per 100,000 population

Legend:
- Reported dog bite cases
- Vaccine consumption at district level in Tamil Nadu

Graph shows the increase in reported dog bite cases and vaccine consumption from 2004 to 2007.
No. of dog bite cases being reported by different health directorates (Jan ‘08 – Aug ‘09)
Lessons from Tamil Nadu Rabies Control initiative

**Strengths**

- AR Vaccine availability
- ABC-AR in Urban areas
- Intersectoral coordination mechanisms in place
- Responsive government
- Regulations and policies in place
- Identified funding

**Challenges**

- Limited Coordination
- Limited analysis of surveillance data
- Rural areas missed in ABC-AR coverage
- Limited involvement on Animal Husbandry
- Need for a strategic approach
Expert consultation on rabies control in TN, August 2011

- Provided a platform for a dialogue between different sectors involved in rabies control
- Resulted in declaration of plans for developing a state-wide rabies control programme in Tamil Nadu
- Facilitated discussions around a national zoonoses control strategy
- SARAH announces the rabies free stage of Sikkim