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Dr Abbas joined PHFI in 2008. He contributed to an economic evaluation of introduction of Hib vaccine in India as a part of a joint LSHTM-PHFI group. He has contributed to a series of baseline mapping exercises, including research prioritisation and program assessments under the Roadmap to Combat Zoonotic Infections in India (RCZI) Initiative at PHFI.

Dr Syed Abbas has also contributed to different training activities at PHFI, including developing training programmes for community representatives under the NRHM and designed a three-month induction training programme for District Malaria and Kala Azar consultants for the National Vector Borne Disease Control Programme.

He has recently completed working on a Wellcome Trust-sponsored PHFI-UKC research fellowship on disease surveillance policies in India. He is also involved in a study in West Bengal that aims to use geographic information systems for developing a community health index.

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Areas of interest: Infectious diseases policy; Disease surveillance; Emerging infectious diseases, Zoonoses, Research Policy, One health, Governance

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RABIES CONTROL INITIATIVE IN TAMIL NADU, INDIA:

A Test Case for the 'One Health' Approach

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ABSTRACT

Introduction

India accounts for approximately half of the global rabies mortality. There is no organised national rabies control programme. Rabies control interventions are generally limited to small urban localities and do not employ intersectoral co-ordination. Tamil Nadu is the first large state in India to implement a state-wide, multisectoral rabies control initiative.

Objective & Methods

The study aimed to assess the rabies control intervention strategy in Tamil Nadu. The CDC Program Evaluation Framework guided the assessment process. Principle stakeholders were engaged in the planning phase to document policy initiatives, describe the programme and to understand the roles of different departments. Surveillance data on dog bites was triangulated with data on vaccine consumption and dog census to identify trends at the district level in the state. Findings and recommendations were shared at different levels.

Results

Rabies control activities in Tamil Nadu were conducted by separate departments linked by similar objectives. In addition to public health surveillance, animal census and implementation of dog licensing rules, other targeted interventions included waste management, animal birth control and anti-rabies vaccination in select municipalities and widespread availability of anti-rabies vaccine at all public health facilities.

Conclusion

This assessment suggests that it is possible to implement a successful 'One Health' programme in an environment of strong political will, evidence-based policy innovations, clearly defined roles and responsibilities of agencies, co-ordination mechanisms at all levels, and a culture of open information exchange.

INTRODUCTION

The document seeks to describe a set of research and advocacy activities at PHFI around rabies to demonstrate the efforts made by the Public Health

Foundation of India (PHFI) to ensure societal relevance of its research and its uptake making by decision makers. India has been demonstrated to contribute half the global burden of rabies. (1) Yet it continued to be neglected from policy discussions till recently. This paper describes a set of research and advocacy activities conducted by PHFI that have helped influenced the popular discourse related to rabies control in India.

SETTING OF RESEARCH

Public Health Foundation of India hosts a multi-sectoral collaboration on zoonotic diseases, called the Roadmap to Combat Zoonoses in India (RCZI) initiative. The initiative aims to promote dialogue among national stakeholders from animal, human and environment sectors for prevention and control of zoonoses in India. One of the first activities of PHFI researchers in RCZI was to identify research priorities that could help in the prevention and control of zoonoses in a short to medium time frame. The prioritisation exercise identified a list of important zoonotic diseases (topped by rabies) that needed to be addressed and highlighted the importance of systems and policy oriented research in helping to address zoonoses in the immediate future. (2)

METHODS

Given this background, WHO Country team in India, also a key member of the RCZI initiative, commissioned PHFI to examine reports of falling incidence of rabies in Tamil Nadu (3) and describe the interventions put in place. The assessment made use of the CDC framework for program evaluation (4) to inform the assessment. An initial

visit was made to the state to understand the key issues involved from the perspectives of major stakeholders and develop a conceptual understanding of the situation of rabies control in Tamil Nadu. This was followed by an extensive set of visits to approximately one third of the districts representing the entire spectrum of dog bite burden and health facilities availability in the state to get a deeper understanding of the disease situation and status of intervention mechanisms.

FINDINGS

Background to initiative

It was also found that the rabies control efforts in Tamil Nadu built upon several policy changes that occurred in preceding 10-15 years.

- Commitment to assured availability of rabies vaccine at all public health facilities (1994)
- Enactment of state licensing of dog rules (1999)
- Ban on use of neural tissue vaccine (2004)
- Ban on killing of stray dogs and launch of ABC-AR programme (2007)
- District level monitoring committees to monitor district rabies control efforts (2007)
- Constitution of state level coordination committee on rabies (2009)

In addition, Tamil Nadu also had several strong players at the state level that helped push the rabies control agenda towards a more evidence-based approach. The state had local headquarters of the Animal Welfare Board of India and a strong animal welfare movement across major cities. These agencies were associated with several dog population control success stories

and were major players in all discussions related to rabies control. Departments of Public health and Municipal Administration were accorded priority in successive state governments. Therefore, as a problem that affected all these agencies, all four were important actors in the development of a vision for rabies control in the state.

COORDINATION MECHANISMS

Following initial set of interactions with the state and district level programme managers from departments of health, municipal administration and animal husbandry, it became clear that the intervention mechanisms instituted in the state for rabies control were as interesting as the actual epidemiological outcomes.

Because of lack of standard case definitions, the surveillance data was equivocal about the incidence of rabies in the state. However, it was found that the state program managers had developed a multi-institutional coordination mechanism to implement rabies control policies in an integrated fashion. The innovation by the state administrators was not only to develop a coordination committee but in the delineation of the administrative powers, resources and responsibilities of the involved stakeholders in such a manner so as to allow transparent coordination.

ROLE OF PRINCIPLE STAKEHOLDERS IN IMPLEMENTATION

Different directorates within the Departments of Health, Municipal Administration and Animal Husbandry in collaboration with animal welfare organizations implemented different aspects of

the rabies control interventions in the state. (Described in Table 1)

FROM EVIDENCE TO POLICY

In addition to sharing the findings of the assessment through conventional publications (5), informal interactions were also organized with the state managers and national experts. This enabled free discussions outside the traditional bureaucratic and academic silos. It also resulted in a better appreciation of the systemic challenges facing rabies program managers by the researchers and of the latest research by the program managers. (6)

These disparate set of research and advocacy activities helped influence several policy decisions. The state government of Tamil Nadu made a commitment to launch a state-wide rabies control programme once the initial set of planning was completed. The networks developed through the consultation helped recognize the achievements of Sikkim achieve elimination of rabies through canine interventions. Some of the national agencies in human and animal health sectors came together after the consultation to propose a national rabies control programme in the 12th Five year plan. (7)

CONCLUSIONS

The above experience demonstrates the value of strategically engaging with different stakeholders in the health system to promote collaborative decision making for rabies control. It also presents one way of operationalizing complex multisec

Table 1: Role of principle stakeholders in rabies control in Tamil Nadu (5)

Stakeholder	Setting	Functions	Data reported
Directorate of Public Health & Preventive Medicine (DPH)	Rural Tamil Nadu (PHCs and Block PHCs)	Provide anti-rabies vaccination through peripheral health facilities Implement disease control programmes, focusing on rural areas Collect disease and dog-bite surveillance data Co-ordinate vaccine delivery	Dog bites by district by year Rabies cases/deaths by district by year District census data
Directorate of Medical Education (DME)	Urban Tamil Nadu	Provide anti-rabies vaccination through medical college hospitals Supervise medical training Collect disease and dog-bite surveillance data Co-ordinate vaccine delivery	Dog bites by district by year Rabies cases/deaths by district by year
Directorate of Rural & Medical Health Services (DHS)	Rural and urban Tamil Nadu (taluka and district hospitals)	Provide anti-rabies vaccination through network of hospitals Collect disease and dog-bite surveillance data Co-ordinate vaccine delivery	Dog bites by district by year Rabies cases/deaths by district by year
Municipal Administration Department (MAD)	Urban Tamil Nadu (corporation/ municipal limits)	Conduct ABC-AR programmes in urban populations Waste management in urban areas Provide anti-rabies vaccination through municipality hospitals	Stray dog population by corporation/municipality (4-year census) Number of ABC-AR procedures conducted per year by corporation/ municipality Municipality census data
Department of Animal Husbandry (DAH)	Rural and urban Tamil Nadu (by district)	Provide animal health services through network of animal health centres Conduct regular livestock census Provide technical assistance to rabies control efforts implemented by MAD	Dog population census by stray/pet (4-year census)
Tamil Nadu Medical Services Corporation (TNMSC)	Rural and urban Tamil Nadu (by health facility at all levels)	Manage procurement and supply chain management of all drugs and vaccines for human and animal health sectors	Vaccine consumption by district by year
Civil society organisations	Urban	Sustained advocacy that facilitated policy changes Promote awareness about animal rights issues Provide oversight to ABC-AR at district and state levels	Policy history

PHC: Primary Health Centre; ABC-AR: animal birth control and anti-rabies vaccination.

- ¹ Knobel DL, Cleaveland S, Coleman PG, Fèvre EM, Meltzer MI, Miranda MEG, et al. Re-evaluating the burden of rabies in Africa and Asia. *Bulletin of the World Health Organization*. 2005 May;83(5):360–8.
- ² Sekar N, Shah NK, Abbas SS, Kakkar M. Research Options for Controlling Zoonotic Disease in India, 2010-2015. Roop R, editor. *PloS one*. 2011 Jan;6(2):e17120.
- ³ Krishna C. PRO/AH/EDR> Rabies, human, control - India (TN). Chennai: ProMed Mail; 2009.
- ⁴ Centers For Disease Control and Prevention. Framework for program evaluation in public health. *MMWR. Recommendations and reports : Morbidity and mortality weekly report. Recommendations and reports / Centers for Disease Control*. 1999 Sep 17;48(RR-11):1–40.
- ⁵ Abbas SS, Venkataramanan V, Pathak G, Kakkar M. Rabies control initiative in Tamil Nadu, India: a test case for the “One Health” approach. *International Health*. 2011 Nov;3(4):231–9.
- ⁶ Kakkar M, Abbas SS, Raghuvanshi B, Venkataramanan V. Report on National Expert Consultation on Rabies Control in Tamil Nadu: 9-10 August, 2011, Chennai. New Delhi; 2011 p. 1–35.
- ⁷ Planning Commission of India. Report of the Working Group on Disease Burden for the 12th Five Year Plan [Internet]. Planning Commission of India. 2011 [cited 2012 Feb 13]. p. 1–256. Available from: http://planningcommission.nic.in/aboutus/committee/wrkgrp12/health/WG_3_1communicable.pdf