Hastening One health collaboration in Gujarat, India: A SWOT analysis.

Sandul Yasobant[1], Krupali Patel[1], Deepak Saxena[2]

[1]Center for Development Research (ZEF), University of Bonn, Germany
[2]Indian Institute of Public Health Gandhinagar, Gujarat, India

Abstract

One health collaboration is being emphasized globally for the effective prevention and control of emerging or remerging diseases. It is important to understand the local need of the health system and disease dynamics prior to develop any collaboration for a resilient health system. Therefore, this study documents the viewpoints of stakeholders from the Gujarat, western state of India prior to developing collaborations for One Health. The current scenario is presented in the form of strength, weakness, opportunity, threat of the health system and way forward is discussed for developing a sustainable One Health collaboration for a resilient health system.

Keywords: One health collaboration, One health, OHC, Gujarat, India.

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Background

One Health is a coordinated, collaborative, multidisciplinary and cross-sectoral approach to address potential or existing risks that originate at the animal-human-ecosystems interface [1-3]. It is clear that One Health approach will not be operative without effective participation and facilitating collaboration among various actors within a complex health system [4]. One Health Collaboration (OHC) is being initiated globally in diversed health system starting from inter-sectoral surveillance [5] to combined practice [6], and to provide combined healthcare services [7]. However, it is important to have the gap analysis of each health system prior to developing such types of collaboration, which is essential where no such sustainable OHC is yet established [8]. India is one among the other country, where no such OHC is yet documented for its health system to tackle the burden of re-emerging infectious disease and anti-microbial resistance [9,10]. As there is no such sustainable OHC strategies available in the regional level, except for outbreaks in India [11,12]; therefore, understanding the strength and weakness of the health system of Gujarat, western most state of India is essential prior to developing a sustainable OHC.

Therefore, the aim of this paper is to document the viewpoints from the key stakeholders from the interface of the human-animal-ecosystem, regarding the Strength, Weakness, Opportunity and Threat (SWOT) for developing OHC in Gujarat, India.

Methods

To gather the information for the SWOT, participatory panel discussion [13] was conducted among the stakeholders from the interface of the human-animal-ecosystem. A participatory panel discussion is public exchange of ideas, giving experts and audience members the chance to discuss a particular topic. Usually, the information for the SWOT is obtained from either the secondary sources i.e. literature review, published case-studies, reports or through primary sources i.e. interviews, cross-sectional studies etc. [14,15]. However, this study adapts the opinions of the stakeholders from the panel discussion [16] to gather the information for SWOT analysis. As, there was dearth number of secondary information for the Gujarat state and the topic of One Health is yet in its nascent phase, Therefore, we preferred panel discussion rather than the group discussion or key informant interview. As One Health believes in the multi-sectoral approach with diverse stakeholders, thus panel discussions have been chosen to gather the required information for SWOT from various stakeholders [17]. In addition, panel discussion also enrich the information from the audience, in this case audience were Medical Officers, Veterinarians, Public Health professionals, Nurses, etc.

The panel member were gathered for the discussion on the above mentioned topic on the eve of World One health Day at Indian Institute of Public Health Gandhinagar (IIPHG), Gujarat, India on 02nd November 2018. The whole session was debated for the situational analysis of the present scenario to combat (re)emerging diseases and missing links needs to address to develop the OHC in Gujarat. This was last for about two hours. The panel discussion was recorded with prior consent and transcribed henceforth for the analysis. Transcripts were done on the same day based on the verbatim notes of the panel discussion and recordings. Manual descriptive content analysis was used to analyze the transcripts [18,19]. The findings were reported by using ‘Consolidated Criteria for Reporting Qualitative Research [20].

Result

The content analysis of the transcription has been shown (Table 1) in the form of the strength, weakness, opportunity and threat of the health system for developing a sustainable OHC for Gujarat, India.

Strengths are internal, positive attributes of the system, which are within the control of health system. The existence of a specified committee, which is responsible for prevention and control including the outbreak situation of zoonotic diseases at

the state as well as the local level. This committee comprises of stakeholders from health, veterinary and forest department such as directors, laboratories, drug controller, medical and veterinary colleges, surveillance officers etc., which signifies an initiative for the multisectoral approach of disease control. Further, the vertical surveillance systems also exists for the human (IDSP: Integrated Disease Surveillance Program) and animal (NADRS: National Animal Disease Reporting System) independently. Administratively, the human-animal-environment systems have good community level workers at the grassroot level. Fortunately, there is a separate budget available with Veterinary department for the zoonotic disease control in the state.

Weaknesses are negative factors that detract from the strengths. Among others, lack of coordination among the stakeholders due to unavailability of standard operating procedures or guidelines on when and how to collaborate, found to be significant. This resulted into the vertical effort by respective department with lack of horizontal collaboration. As there are few number of animal investigation labs, this might hinder the process of early detection of any disease.

Opportunities are external factors in the environment that are likely to contribute to the success.Opportunities discussed during the panel discussion are most of the stakeholders are keen to work collaboratively, once the common strategy for collaboration established. In addition, there is a Veterinarian recruited under the IDSP system, which might also be an entry point for OHC. Existence of the colleges for the human medicine and the veterinary are under one university, which could be a great chance to establish combined One Health education and/or research for the newer generation.

Threats are external factors that have no control over it. One of the major threats is unavailability of large scale population based data, which is essential for early detection of disease. Because of this threat, most of interventions could not be effectively measured at the system level. Another threat for the OHC would be differential surveillance data in the human and the animal health system, which might to be considered prior to developing One Health surveillance mechanism in a collaborative way. Further, lack of regulations on veterinary biomedical waste management is one of the biggest threats as this could lead to spread of zoonotic disease not only to handlers but also *via* environment to the community. Another major threat is from the environment component i.e. the use of pesticides, as there is no structured guideline or regulation on usage of pesticides. Evidences from other research shows the excess usage of pesticides are prevalent in India and this might be the one of the important causal path to transmit the disease from agricultural product to human or animal.

Table 1: SWOT analysis of health system for developing One Health Collaboration in Gujarat, India.

Strength	**Weakness**
Existing state and district zoonotic disease committee Surveillance systems and vertical programs are in place Well-functioning systems at each administrative level Medical and Veterinary colleges are under one university Specific fund available with Animal husbandry department for zoonoses	Coordination only during reported outbreaks Data collected by individual department, however no integrated risk analysis/ sharing Less number of animal investigation labs Lack of skilled human resources i.e. many posts in departments remained vacant
Opportunity	**Threat**
Keen to work together, however require a guideline for the same Other departments have proved to work collaboratively Collaborative One Health education/ research Veterinarian in current human surveillance system	IDSP & NADRS reporting system need to be similar Lack of biomedical waste guideline for veterinary hospitals/clinics Lack of population level data Lack of guidelines for the use of pesticides Lack of involvement of environmental/agriculture department
IDSP: Integrated Disease Surveillance Project; NADRS: National Animal Disease Reporting System.	

Discussion

As per the recommendation of Ministry of Health & Family Welfare, Govt. of India the State and District level for prevention and control of zoonotic diseases committees are constituted in 2018, which provides a platform to gather multiple stakeholders to discuss the regional and local issues. The existing surveillance system for the human i.e. Integrated Disease Surveillance Project (IDSP) is in place with its state, district and block level units. In addition, for the animals the National Animal Disease Reporting System (NADRS) is reporting diseased animal cases as per the guidelines of World organization for Animals (OIE). Further, the recent recruitment of Veterinarian in the IDSP provides a great opportunity to integrate both the surveillance system; however, a vigilant assessment of both the surveillance system is recommended prior to the integration. The collaboration during the outbreaks is well documented in the state of Gujarat that shows further opportunity to work together. However, the formal terms of reference for each stakeholder will add the value to this type of OHC. The lab capacity especially for the animals, which need to be developed for early detection and diagnosis. The key issues like lack of biomedical waste guidelines especially for the animal health system and applications of pesticides need to be streamlines as earliest possible.

Way Forward

The lack of coordination between the human and the animal health system need to be developed on the priority basis. As both the system have their own infrastructure, human resources, budgets for respective vertical programs, it will be good to have an integrated plan for combined healthcare delivery. In addition, the surveillance data need to be integrated for the early prediction of emerging and reemerging diseases. As both the medical and veterinary colleges are under one university, it will be good to develop an integrated module on One Health and need to be incorporated to the current education system. However, the existing zoonotic committee at state and the district level provides a platform for multi stakeholders, it needs to be monitored closely for its effectiveness. Early detection of diseases either among the animals or at the humans are prime concern, therefore the surveillance and laboratory services need to be strengthened. Last, but not the list is to sensitize all the stakeholders from both the system about the benefits of the collaboration. Further the OHC could not be complete unless the environment and the agriculture sector is incorporated to the human and the animal health system.

The SWOT for developing OHC in Gujarat have shown that most of components are in place in the system. However, a structured formalization/guidelines is required for the state to develop a sustainable OHC in near future. This will ease the policy makers where to invest the time and resources to build the One Health collaboration in Gujarat, India.

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Correspondence to:

Dr. Deepak Saxena,

Indian Institute of Public Health Gandhinagar (IIPHG),

Opp. Air Force Head Quarters, Gandhinagar,

Gujarat, India

E-mail: ddeepak72@iiphg.org