Uniting for One Health – The Importance of Community Engagement in One Health

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Abstract

The One Health approach emphasizes the interconnectedness of human, animal, plant, and environmental health. It mobilizes various sectors and communities to address health threats and promote well-being. In India, zoonotic diseases pose significant risks, particularly to livestock-rearing communities. Human brucellosis, scrub typhus, and anthrax are prevalent, with specific risk factors identified. Vector-borne diseases like malaria and dengue also threaten communities. Community engagement is crucial for implementing sustainable One Health interventions, integrating local knowledge, building capacity, and promoting risk communication. Despite challenges, such as resource intensity, community engagement fosters inclusivity, participatory decision-making, and improved health outcomes.

Keywords: One Health, Community engagement

Introduction

The One Health approach recognizes the interdependence of the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) and seeks to mobilize multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems. Communities form an integral part within the one health framework as they can be vulnerable to one health threats such as zoonotic transmission of diseases and also play a key role in the implementation of sustainable one health interventions. Risks reported for India are several.

Pastoralist or livestock rearing communities are often at risk of acquiring zoonotic infections. Many zoonotic diseases are prevalent in livestock and are occupational zoonosis in the livestock farmers in India. Lack of knowledge on the disease transmission, prevention and control measures are potential risk factors in livestock rearing communities. Human brucellosisis common in rural India. Close contact with goats and sheep, and raw milk ingestion are the major risk factors.

Villagers of Gorakhpur are at risk of infection with scrub typhus, which might lead to Acute Encephalitis Syndrome (AES). Some of the risk factors identified for occurrence of scrub typhus has been storing of firewood in houses and children playing in bushes infested with mites. Another example is the anthrax outbreaks that affect communities in Orissa every year. The soil in the forest is highly organic with good moisture and supports anthrax spores. Due to scanty agriculture, tribals mainly depend on forest for livelihood. Risk of infection increases due to anthrax spores in the wild. Outbreaks of anthrax in these indigenous populations occur as food poisoning following consumption of contaminated cattle meat.

Communities also face the threat of vector borne diseases due to common close environment. Important vector-borne diseases for India include malaria, dengue, Japanese encephalitis, kala-azar, lymphatic filariasis and chikungunya. Community awareness and participation is key to successful implementation of vector control measures for mosquitoes.

Community engagement is a pillar in the implementation of a sustainable one health framework. which ensures active participation and regular communication with the community to achieve positive health impact and outcomes. It has many facets in the domain of One Health, including knowledge integration. All communities are endowed with local knowledge and perspectives regarding their own health, of their livestock and also their environment. Understanding and utilizing this knowledge in risk factor ascertainment can help recognize inter-linkages and plan integrated health delivery strategies for humans and animals that are locally relevant and sustainable.

Capacity building is another facet of community engagement. It is possible to involve the community in

surveillance and active reporting mechanisms for zoonotic diseases and spillover threats and also increase their knowledge and promote safe practices. ,

Risk communication is another sphere that can facilitate desirable behavioral changes and health promotion activities. Community members can be sensitized on various zoonotic diseases that are prevalent regionally and their modes of transmission. Such workshop scan aid in improving awareness, especially in the context of information about the complex inter-relationship between human, animal and environmental health , as well as building solutions against spillover mechanism . For instance, in settings where the human and animal population lives together such as livestock rearing communities, integrated one health camps can be organized for detection of diseases in the human population and animals, the assessment of the risk factors in the community, the prevalent knowledge, attitudes and practices, the nutritional status of the community, tick surveillance in animals, etc. The Indian Council of Medical Research (ICMR) had the opportunity to join in the excellent initiative of One Health Support Unit (OHSU), Department of Animal Husbandry & Dairying, to participate in such One Health Camps.

IInclusivity is an important feature of community engagement . It gives the local level stake-holders an opportunity to participate in the decision making process, which promotes social equityin the process of addressing one health concerns. The interventions designed through participatory processes find greater acceptance amongst the community members and create a sense of ownership in the health interventions and health outcomes of the community.

There are also some limitations. Community engagement as an approach can be resource intensive as the needs of various communities are different and individual programmes need to be tailor-made. Such interventions may lack reproducibility and care must be taken to use local perspectives in conjunction with scientific research methods .

Summarily, community engagement can be a tool for knowledge integration, risk-communication, capacity building, surveillance for zoonotic diseases, behavioral change, participatory decision making, inclusivity and empowerment of the community to optimize its health outcomes. It strengthens the health system in a holistic manner through bringing last-mile connectivity by reaching out to the community through bottom-up approach.

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Conflicts of Interest

None.

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