EDITORIAL

One Health Governance in India: Scientific Perspectives on the National Model Framework for States and Union Territories

Kamran Zaman, Abhranil Gangopadhayya, Ankita Saha, Jyothi Bhat

Department of Microbiology & Molecular Biology, Indian Council of Medical Research National Institute of Traditional Medicine, Belagavi (ICMR-NITM Belagavi), Nehru Nagar, National Highway no. 4, Belagavi, Karnataka

CORRESPONDING AUTHOR

Dr Jyothi Bhat, M.D. Microbiology, Scientist 'F' (Medical), Department of Microbiology & Molecular Biology, Indian Council of Medical Research National Institute of Traditional Medicine, Belagavi (ICMR-NITM Belagavi), Nehru Nagar, National Highway no. 4, Belagavi, Karnataka

Email: bhatdr@gmail.com , jyothi.b@icmr.gov.in

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Abstract

Emerging zoonoses, antimicrobial resistance, and climate-linked health threats demand countermeasures that transcend geopolitical boundaries. India's unique ecological and administrative structure makes One Health operationalization both urgent and structurally complex. However, translating One Health from concept to practice has proven difficult, largely due to fragmented governance and weak intersectoral co-ordination. The Government of India's governance framework model - Strengthening One Health Governance in States and Union Territories under the National One Health Mission, needs broader scientific dissemination, which will be essential to generate field evidence, catalyse peer learning across States and Union Territories, and strengthen its execution.

Keywords

One Health, Zoonoses, Antimicrobial resistance, National One Health Mission, Health governance

Introduction

The human-animal-environment interface serves as a frequent source of zoonotic infections, the latter contributing to more than half of the known human pathogens (1). Applying it in practice, however, can prove intimidating, due to various political, legal, ethical, financial, societal and capacity-building barriers that can only be overcome by the commitment of individual, organizational, sectoral and political societies (2). To make the One Health approach work, there needs to be a breakdown of barriers that still separate human & veterinary medicine from ecological, evolutionary and environmental sciences (3). Rumination on the prospect of global health, and how much the core public health capacity of a country is, forms the focus of many articles in which policymakers comment on the governance of global health (4). When

governance applies to multiple sectors, the handshake among these sectors becomes smooth and practical, making the understanding of each specialist's role clearer, decision-making faster, and gaps in understanding or funding more easily filled (5).

The World Health Organization (WHO) has published a One Health Joint Plan of Action (OHJPA) document (6) for enhancing collaboration among governmental sectors. Reviews have been made on existing frameworks, such as the Tuberculosis – Infection Prevention & Control (TB-IPC) measures that are presently implemented globally, and it has been found that it greatly depends on certain "hardware" and "software" influences (7).

The National One Health Mission (NOHM) launched by the Government of India, is guided by a framework consisting of two apex committees (8). The first one is the Executive Steering Committee, headed by the Health Minister together with the Vice Chairman, Principal Scientific Adviser for the Government of India. The second apex committee is the Scientific Steering Committee, led by the Principal Scientific Adviser, aiming towards providing scientific guidance, promoting interdepartmental collaborations and ensuring that policy decisions are based on evidence and developing research. These two committees oversee the co-ordination between policy leadership and technical aspects, ensuring an integrated national approach to One Health. The proposed framework is a multi-tiered governance model for seamless implementation of the One Health approach across all administrative levels. At the top is the State/UT level Executive Committee serving as the main governing body with responsibilities involving guiding policymaking, approving strategy-based imperatives, and making sure that One Health initiatives are implemented effectively through proper interdepartmental co-ordination and resource allocation. The chairperson of the State/UT-level Executive Committee shall either be the Chief Secretary or an officer with equivalent rank. He/she will then be considered as the Vice-Chairperson of the Executive Committee. The next tier is the State/UT Intersectoral Steering Committee, which will be headed by a senior administrative official who has been a part of any main One Health stakeholder departments.

The State/UT One Health Unit will serve as the backbone for co-ordination and facilitation of all One Health-based activities and will be led by a senior administrator who has been designated as the State Mission Director. The District Level One Health Committee will work with the State/UT One Health Unit to monitor alignment of local implementations with the priorities of the State/UT and will be headed by the District Commissioner or equivalent official. The Block Level One Health Committee is established at the block level, which maintains implementation of One Health at the block level and will be reporting to the district-level One Health Committee. The committee is headed by a Tahsildar, Assistant Commissioner, or Block Development Officer. The Local Self Government (LSG) One Health Committee is responsible for establishing One Health facilities at a local level, like Gram Panchayats, Municipalities, and this is led by an elected person of that specific LSG. They will be reporting to the Block One Health Committee (8). Their involvement helps in bottom-up surveillance, which works in conjunction with health facility-based surveillance in the Integrated Disease Surveillance Programme (IDSP). Community-based reporting also helps in improving risk communication, facilitating behavioural adherence during outbreaks, and providing timely contextual information for decision-making at the higher administrative level.

The Indian public health systems have demonstrated remarkable operational execution of One Health approach in outbreak responses. For example, in case of avian influenza, the one health responses involved joint surveillance and rapid response across human and animal health sectors. Similarly, Acute Encephalitis Syndrome in eastern Uttar Pradesh was managed with well documented

convergence across clinical care, community engagement, environmental management and vector control (9). The Dastak campaign and other large-scale behaviour change programs made it possible for ASHA, ANM, and Anganwadi networks to communicate risks and identify early symptoms. The Swachh Bharat and Jal Jeevan Mission programs, on the other hand, focused on environmental risk factors. At the same time, Poshan Abhiyaan and the State Nutrition Mission worked to strengthen children's nutrition by targeting their underlying weaknesses (10). This combination of health services, community involvement, environmental management, and social programs is an example of how the One Health approach can work within existing public systems. In these experiences it is clear that collaboration among districts and the establishment of bottom-up reporting systems within their governance framework are critical to success. The established precedents provide the proposed governance framework with a solid foundation for success.

***Figure 1*. Multi-tiered One Health governance framework for implementation at State, district, block, and Local Self Government levels in India (adapted from Strengthening One Health Governance in India) (created with: edit.org; date accessed: 19th February 2026)**



Sectors like Health, Disaster Management, Animal Husbandry, Forestry and Environment can be strategically overseen, coordinated among and consulted for policy making by the existence of such committees. Digital platforms that are interoperable make it possible to perform real-time analysis and early warning when it comes to human, animal, and environmental health data. Frameworks recommend the creation of a geographically distributed network of high-containment laboratories, referral systems that are interoperable and connected, quality assurance processes, and biosafety procedures. It might be difficult to act according to guidelines set by frameworks, which is why collective discussion & commentary on such frameworks are

necessary from time to time, particularly in the wake of large-scale epidemics (4).

The Governance Framework outlines the essential functional blocks and required enabling structures. The framework delineates roles and responsibilities of the Executive Committee, Intersectoral Steering Committees and One Health Units to drive cross-departmental co-ordination. The framework also sets up mechanisms for regular reporting and review cycles. Existing institutional capacities can be leveraged to optimize resources. These would include collaborative laboratory networks, surveillance systems, databases and technical infrastructure. Care would be taken to ensure that digital surveillance systems and integrated dashboards are interoperable with Integrated Disease Surveillance Programme (IDSP) and National Digital Livestock Missions (NDLM) platforms to offer early warning signals and aid in decision support. Capacity gaps in terms of trained manpower would be addressed by providing streamlined training, assigning multidisciplinary staff and drawing on expertise from multiple sectors to function within the State One Health Units. These components work together to provide a framework that merges governance with action (8).

The Southeast Asian and Western Pacific regions of the WHO have already utilized the 2008 version of the zoonotic-specific, jointly-developed guidance document, which was succeeded by the 2018 document that expands on an anti-zoonotic strategy and encompasses matters of food safety, security, AMR, etc. (5). The OHJPA, acts as a guidebook to frame upstream policies, scale up One Health, make use of existing resources, and practice the theory of change that lies at the core of collaboration, communication, co-ordination, and capacity building that One Health is based upon (6). Also, while not directly correlated, lessons can be taken from the management strategies of non-zoonoses, like human TB, and applied to potentially emerging or existing zoonotic threats (7).

Even with the increased popularity of One Health and a huge gain in the movement's momentum, the challenges pertaining to actually linking multidisciplinary research and policy action together still remain (11). Integrating One Health into the governance of India at the state and district levels has already been recommended by the central government (8), and it also exists as a published document. Similar to countries like the Philippines, which have achieved considerable success in this regard, the Indian government is further strengthening its One Health approach from all perspectives (12).

Implementation of One Health governance in India requires actionable and context-based strategies complementing the current Indian Health framework (8). Structured and multidisciplinary training programmes should be brought towards capacity building and to enhance co-ordination among the three sectors of Human, Animal and Environmental Health. Development of interoperable digital surveillance systems with clearly defined data-sharing protocols will facilitate timely integration of information across sectors. Operational research should be built into the state and district-level implementation strategy to generate context-specific evidence to inform policymakers for adaptive policy refinement. Strategic convergence of financial and technical resources across sectors may improve efficiency while avoiding duplication. Finally, sustained engagement with local governance and community-based institutions will increase early detection and communication of risk and mobilise the required resources for participatory responses further aiding in the successful operation of the governance framework in various administrative settings.

AUTHORS CONTRIBUTION

Conceptualization; Writing - original draft & preparation – KZ. Writing - original draft & preparation: AG. Writing - original draft & preparation - AS. Writing - review & editing; Validation - JB.

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Conflict of Interest

There are no conflicts of interest.

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During the preparation of this manuscript, the author(s) used ChatGPT to improve the readability and language. After using this tool, the author(s) reviewed and edited the content as needed and take full responsibility for the content of the publication.

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