



Perspective

Implementation framework for One Health approach

Inextricable coexistence of human beings with animals, plants and environment has been both beneficial and malefic. Animals and plants sustain human life and are essential for food security for the growing human population. An ever-increasing and unstoppable number of human infectious diseases arise from animals; 60 per cent of all human infectious disease are transmitted from animals¹ and 75 per cent of all emerging infectious diseases originate from animals¹. US Centers for Disease Control and Prevention estimate that every year, around 2.6 billion people suffer from zoonotic illnesses and around 2.7 million succumb to these². Several pandemics in current millennium including severe acute respiratory syndrome (SARS), middle-east respiratory syndrome (MERS), influenza H5N1, influenza H1N1 and influenza H7N9 have animals as their sources. Around 1.67 million viruses are estimated to be enzootic with up to 50 per cent of these having the potential to invade humans under conducive environment including deforestation and damage to local ecosystem³. One of the major drivers of antimicrobial resistance (AMR) perceived as the biggest challenge in global efforts to control communicable diseases, is the humongous irrational use of antimicrobial agents in the animal health sector⁴. Responding effectively to these challenges warrants a comprehensive, multisectoral, multi-institutional and multidisciplinary approach.

One Health is a validated, integrated and holistic approach that is being advocated by the World Health Organization (WHO)⁵, the Food and Agriculture Organization of the United Nations (FAO)⁶ and the World Organization for Animal Health (OIE)⁷ for combating health threats to humans and animals through human-animal-plant-environment interface. A tripartite agreement⁸ between these three organizations has been in vogue since 2010 to apply One Health approach. One Health concept aims to attain optimal health for people, domestic animals, wildlife, plants

and environment. This makes it a complex philosophy with inherent barriers in successful implementation at the country level where sector-specific approaches have been in vogue and well established.

Some of the barriers hampering implementation in countries include fragmented and disconnected governance of health, animal health and environment, lack of clarity about the definition, concept and scope of One Health approach, under-recognition of its economic benefits, absence of an agreement between health, veterinary and environment professionals on way forward and inadequate training activities⁹. Efforts have been made to institutionalize and operationalize One Health in Rwanda by having a three-pronged approach. This nationally coordinated plan comprised interdisciplinary collaboration at the government level, strengthening surveillance system for early detection of zoonoses and augmenting capacity for all aspects including research at the human-animal-ecosystem interface¹⁰. Zambia utilized this approach in mitigating outbreaks of avian influenza and pandemic influenza in the past¹¹.

Framework for effective implementation of One Health incorporates political commitment, policy formulation, sustainable financing, programme development, knowledge sharing, institutional collaboration, capacity enhancement, engagement of civil society and active participation of the communities. One Health is a simple and powerful concept with a complex implementation process. It is imperative to bring about a change in the narrative in national response to zoonoses, improving food security and ensuring environmental integrity. The change has to be catalyzed by the top political leadership. Strong continuous advocacy, especially by international development partners, namely FAO, OIE and WHO, sharing of evidence-based outcomes, expected economic gains and global best practices should be shared with the top national leadership. The

Sustainable Development Goals being intertwined offer a unique opportunity for advocacy as well as an integrated methodology¹². The political declaration by the United Nations General Assembly on combating AMR¹³ strongly recommends the One Health approach.

Pooled national financial resources can fuel accelerated implementation of One Health approach for better public health outcomes. A paradigm shift in the national policy formulation is urgently required to desectoralize human, animal, plant and ecosystem health and to take a more integrated, interconnected and logical programmatic approach towards human and animal health. Knowledge integration at every stage of policy development shall be a prerequisite to strengthen the coordination and governance¹⁴.

The success of One Health implementation shall depend on the extent of attainment of institutional collaboration, joint planning and coordinated comprehensive surveillance for the early detection and prevention of zoonoses¹⁵. Data and science shall be the cornerstones of planning, implementation and monitoring. The all-encompassing multisectoral capacity building of various institutions needs to be undertaken swiftly for fast-tracking initial efforts. For long-term implementation, theory and practice of One Health should find exhaustive inclusion and visibility in the educational curriculum as well as continuous skills' upgradation activities for all specialities.

One Health may not succeed fully if it remains a purely governmental endeavour. Awareness of individuals and civil society followed by their active participation shall augur well for the success of this programme. The celebration of 3rd November every year as the One Health Day may galvanize engagement of communities and enhance advocacy with decision makers. One Health programme has to be evidence driven. Research needs to be promoted and encouraged for a better understanding of risk management, economic implications, improving intersectoral coordination and translating global best practices into national action plans to provide policy inputs and help in the development of cost-effective interventions. Today, the world faces the burgeoning challenge of emerging infectious diseases, AMR, food security to rapidly growing human populations and mitigating environmental degradation. This is indeed a long battle but can be won by working together with an honest implementation of One Health approach.

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