



# ONE HEALTH APPROACH IN INDIA : A REVIEW OF OPERATIONAL CHALLENGES

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## **Abstract:**

The domain or field of Public Health has evolved and has witnessed various conceptualizations in terms of approaches with time. It is apt to argue that the approaches in public health have been drawn on both forward and backward linkages. This Paper initially deals with the historical conceptualization of One Health, attempts to understand the place within the broad domain public health. The focal concern that is tackled is the transition of One Health as a theoretical concept to a functional implementable reality, the mechanisms of health system & services and challenges. **Methodology:** The methodological component is based upon review of sources of literature and coding of thematic findings have been done by QDA Miner Lite software application. **Results:** The fundamental arguments that are displayed from the results is that One Health as an approach is not something new, it can be traced through a trajectory either as a component or specifically in certain specific fields within Public Health and sometimes conceptually without the official recognition or tag. The major thematical findings discussed range from inter-sectoral linkages, convergence, need for integration. Finally, the summarized insights regarding certain priorities which need to be addressed to tackle operational challenges have been mentioned.

**Key Words:** One Health, One Health Approach, Convergent Action, Integration

## **Introduction:**

The concept of One Health is a theoretical and practical which is being mainstreamed, is being transitioned into application and institutionalized in the health services system much later that it should have. The immediate question that arises is that does it mean that it is getting long due credit; the answer is yes. The initial aim of the paper is to understand the growth and trajectory of the concept of One Health and whether the claims of it being something new is correctly conceptualized. Further, this paper will try examine the fundamental conceptual construct of the epidemiological triad and place One Health in it. Further, One Health will be examined in practice and operational challenges in institutionalization and practice will be described. Finally, this paper will encompass the need for inter-sectoral linkages and convergence while integrating One Health into Policy to transition into One Health Approach.

The initial brief regarding One Health can be stated as a collaborative, coordinated, multisectoral way which aims to achieve optimum health outcomes by recognizing the dependency, interaction between human, animal, plants and the common shared environment. The argument that needs to be conceptualized is the relationship between human, animal, plants does tend to possess a shared environmental spectrum where inter-linkage in terms cause, stimulus and effect is the procedural output. Also, the contemporary factors that need to encompass into frame is that of climate change, damage to biodiversity, changes in ecosystems which are creating mutations in relationships further resulting infections of varied species which finally lead to communicable and non-communicable diseases.

Zoonotic diseases are those where the transmission of infection takes place through animal to human chain of contact. The share of zoonotic infections among the contemporary emerging infectious diseases is relatively high. Nearly >60% of the pathogens that infect humans cause zoonotic diseases in humans. The highest zoonotic disease burden, with widespread illness and death, is prevalent in Ethiopia, Nigeria, Tanzania, and India.<sup>1</sup> The trend that can be conceptualized One Health has become extremely relevant in dealing with major diseases like SARS, MERS in the past, Ebola in the recent past at a global scale.

Although, the direct mainstreaming within Public Health happened during SARS and Avian Influenza the concept can be traced back to initial concept of One Medicine. The concept of One Health is not new and can be traced back for at least two hundred years, firstly as One Medicine, but then as One World, One Health and eventually One Health. Also, it can be viewed from the literature that there was talk of developing a convergent coordinated multi-disciplinary approach just before the turn of Century in 1999. The thematic conferences were organised by the Society for Tropical Veterinary Medicine and the Wildlife Diseases Association under the aegis of 'Working together to promote global health'. This can be followed up with focal discussions in 2001 in Pilanesberg, South Africa, addressed issues at the domestic animal/ wildlife interface relating to disease control, conservation, sustainable food production and emerging diseases.<sup>2</sup>

The collective consciousness can be displayed in the Manhattan Principles were formulated and finalized in 2004 with a focus towards these core areas which have been summarized below:

1. Recognize the essential link between human, domestic animal and wildlife health and the threat of disease to these as well as society and economy.
2. Devise adaptive, holistic and forward-looking approaches to the prevention, surveillance, monitoring, control and mitigation of emerging and resurging diseases that take the complex interconnections among species into full account.
3. Form collaborative relationships among governments, local people, and the private and public (i.e.- non-profit) sectors to meet the challenges of global health.
4. Provide adequate resources and support for global wildlife health surveillance networks that exchange disease information with the public health and agricultural animal health communities as part of early warning systems for the emergence and resurgence of disease threats.

5. Invest in educating and raising awareness among the world's people and in influencing the policy process to increase recognition that we must better understand the relationships between health and ecosystem integrity to succeed in improving prospects for a healthier planet.<sup>3</sup>

In the Indian context, One Health Approach has had relatively slow growth and has been stressed in accordance with global trends. The learning and trajectory of One Health has not been not been different programmatically but the experience and needs have been different because of geographical and demographic differences. If the inquiry is expanded further the conceptualization that will be established is that in India the construct of different specifications of human health, animal health, zoonoses. The point of interest here stands that the Animal Health is part of Department of Animal Husbandry, Government of India where as human health Department of Health & Family Welfare and Department of Health Research which components under Ministry of Health & Family Welfare. The specific difference in implementing stakeholders can displayed through this and the initial need for Convergent Action arises. The specific strategies that have been used are targeted disease control programs which have been extensively implemented across India. These programs (Revised National Tuberculosis Control Programme, National Vector Borne Disease Control Program etc. The concept that needs to be focused is that these programmes were vertical implementation. But the important consideration which has to be noted that during localized outbreak of Nipah virus in Kerala in the recent past the concept of One Health has been strategically put in to tackle the task. The epidemic of Nipah in May 2018 in Kerala with high case fatality, highlighted the importance of employing a One Health approach.<sup>4</sup> The final trigger for One Health to be conceptualized as an independent Approach in Public Health came with the Pandemic. The One Health Approach has been used in India to tackle varied concerns but the moving forward the focus needs to be on existing capacities and on building, enhancing upon them. Also, the limitation of the stakeholders involved were clear. This also paves the way for an approach which involves inter-ministerial collaboration. It is important to admit at the beginning of such collaboration that institutions have their own structures and boundaries with a level of rigidity.<sup>5</sup> The existing conceptualization essentially talk about how One Health will take time to come into integrated practice but the attempt is here to understand what might be the potential operational challenges which interventions can be prioritized to tackle the challenges. The arguments presented above have provided a brief insight into the trajectory of the term One Health and eventually conceptualization of One Health Approach. It also indicates that operationalization of One Health has localized challenges that may exist while implementation of the concept or approach into practice. The objective moving forward is to understand these challenges and the means to tackle it.

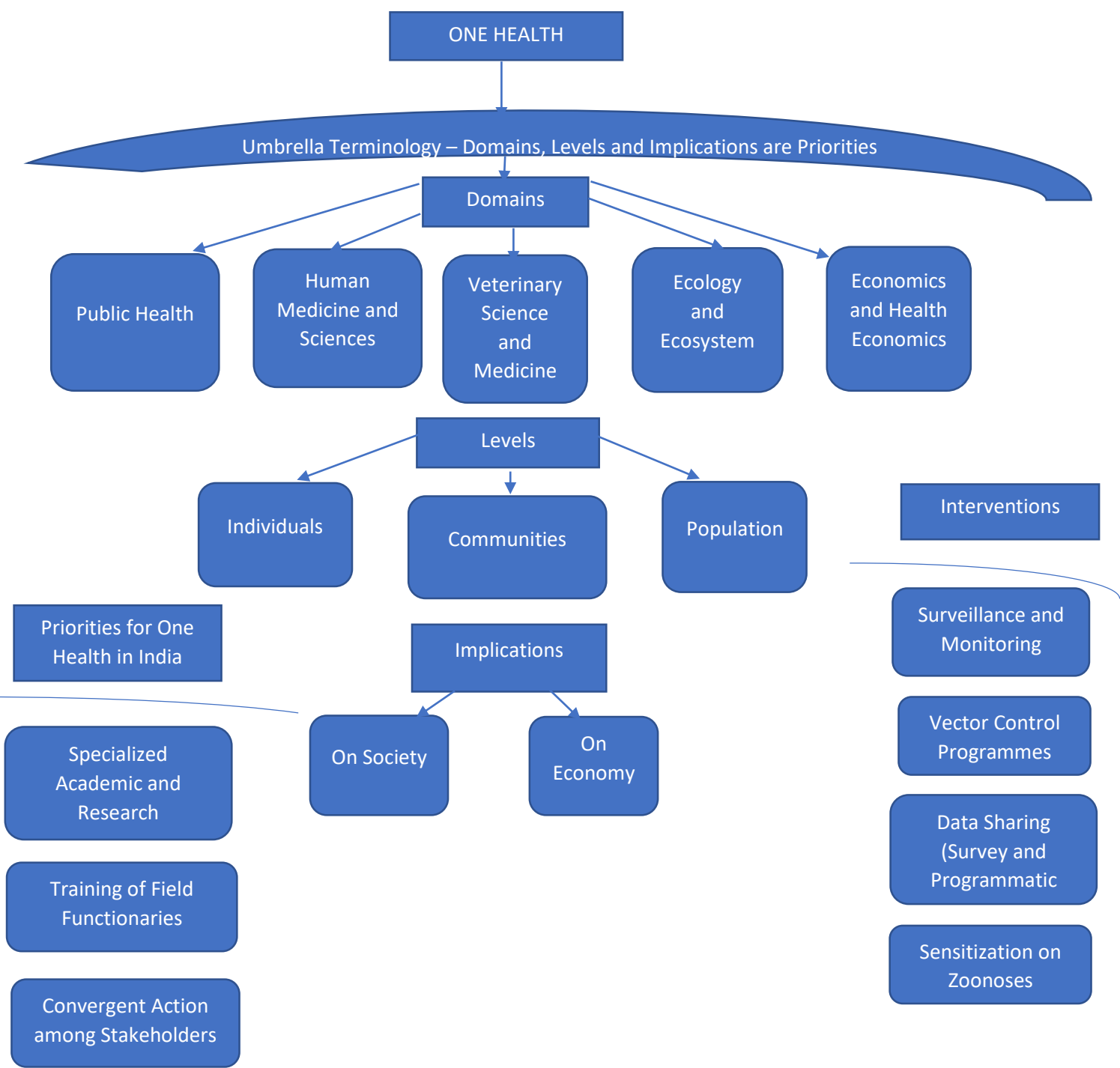
## Methodology:

This paper is a theoretical review by nature. The literature was initially screened and shortlisted on the basis of language and English was the preferred inclusion criteria. Furthermore, the second screening and resources were selected with the purpose of chronology in terms of Pre-Pandemic and During Pandemic. Also, informative and descriptive content of the article was taken into consideration while selecting the resources to be used as literature. The review sources were done intensively in a dual step procedure. Initially, manual review of literature was carried out and the specifics were noted and subsequently, during the second review the QDA Miner Lite software application has also been used to code the themes. The specific findings from both steps of the review process have been compiled to draw the specific dedicated thematic findings. The ethical consideration undertaken was that the respective sources were accessed ethically via the search engine of PubMed and respective journal websites and original writing was conducted and necessary citations have been duly made for the sources used in this study.

## Results and Discussion:

The findings of the study will be presented thematically and structured accordingly. The findings briefly range within the ambit of requirement of One Health to be integrated in Academia, Lack of One Health in Training across all levels especially at the level of grassroot field functionary. The practical challenges that are posed while integrating One Health into Health System has been discussed.

The initial theme that needs to be discussed academic & research. The insights from the research provide a direct understanding that research on One Health and allied issues is definitely not a new phenomenon it has been there in the array of broader public health since the early 2000's. The notable argument that needs to be constructed is that have the findings of the research been integrated in academia? The answer to this question is no because as the literature suggests there is an acute lack of mainstreaming of One Health in Medical and Social Sciences Education, relatively Veterinary Education has a relatively greater presence of One Health in it. A PhD specifically in One Health is available through the University of Florida whereas few other institutions offer a dedicated Postgraduate Programme on the topic.<sup>2</sup> The priority in India at the moment is that there needs to be specialized Academic Programmes to enable the existing students of medical science, veterinary science, public health and all allied medical sciences to get direct and dedicated exposure. The perspective stands that integration of the concept has been done within the medical education curriculum as a portion of the broad whole but it should have dedicated specific programme for it to be covered in a professional manner. Also, the question arises that general Academia will enable us to teach and train students who will eventually join the workforce in the future but what about the present? The training of existing working professionals is extremely vital if we are to meet the present need in these times of the Pandemic.



**Figure 1:** Convergence and Integration required in One Health Approach in India

The second thematic finding that becomes relevant is the importance of One Health among Field Functionaries for Grassroot Practice. The fundamental core of Health System is the Clinical Service Provision but the role of Field Work Practitioners (ANM, ASHA in India) become vital in adopting, operationalizing and implementation at the grassroot. Also, while discussing this, there arises a need to conceptualize the convergent action and inter-sectoral convergence in practice. The training of all stakeholders needs to be carried out in One Health because in the field stakeholders need to work together, in tandem to tackle the cause at hand. There is significant finding that can be drawn from the literature that Veterinary professionals are relatively more hands on trained in One Health but the Medical and Social Science Professionals tend to work from the periphery while practicing One Health. While conservation, ecological and veterinary professions are getting increasingly engaged with One Health, much of the medical/clinical and social sciences

professions are only peripherally aware of its nuances.<sup>4</sup> It is only after we achieve a trained diverse multi-disciplinary workforce can we work symbiotic relationship (removal of ego and territorial attitude among stakeholders and common collective commitment) towards achievement of One Health.

One Health is in an embryonic stage in India, there are many crosscutting policies and regulatory measures that are operating and conducive for further development of the approach.<sup>1</sup> One Health in Indian context has been a logistical nightmare with most major challenges and barriers arising from logistics. The critical barriers that exist range from institutional, inter-agency, corporate interests than technical or clinical by nature. There needs to be a collective political commitment for One Health to be implemented in practice. The rationale that One Health as a full-fledged Approach will draw direct benefit to equity, economic and health gains thus development as a whole need to be embedded among all stakeholders. This brings the concept to the trajectory from commitment to implementation where the logistical and functional challenges come into existence. The term Convergent Action essentially means both horizontal and vertical integration. The Ministries and In-Line Departments need to work in tandem and share findings, approach, breakthroughs, and most essentially data. Also, at the same time the levels analysis displays the need for convergence among levels and decentralization during implementation with effective monitoring.

India requires strategies based on stakeholder convergence, willingness to cooperate for a collective action, collaboration and co-ordination between various stakeholders continual reporting and surveillance of public health exigencies, critical reviewing and crisis management. A standout finding that kept repeating its presence was regarding need for inter-disciplinary research and integration the findings into training. The long-term vision of trainings based on field research should be to bring attitudinal, behavioural change and institutionalization of One Health Approach. The findings can be summarized through major themes that One Health has been a part of Public Health, it has been viewed as a domain under Public Health not as an Approach and the time has come to treat One Health as an independent individual Approach with the required support in the form of inter-sector collaboration, multi-disciplinary research and policy implications.

## **Conclusion:**

The attempt that is being made is to basically connect a forward and backward linkage with the existing concepts in literature and major findings. Also, the specific recommendations will be discussed. The concept of One Health will be conceptualized with the straight existing Epidemiological Triad. The basic concept of Triad displays basically talks about the 3 major components – Environment, Agent and Host. The conceptual understanding of the triad needs to be understood with the components of One Health; the environment component in the triad is essential in creating conducive conditions for the agent to enable the transmission of the vector and One Health primarily focuses on the targeted intervention in this environment. One Health as a control specifically targets intervention for implementation of vector control programmes to tackle the agent and transmission animal to human or any other source to human or animal thus also focusing on the

host trying to achieve a preventive stance. There is another landmark achievement that is imperative to mention here that the Alma Ata Declaration called for Health for All. It has been more than 40 years, but the question that is usually asked have the goals of Alma Ata been met? The question that should be asked can Health for All, goals of Alma Ata and more importantly Health of All be achieved without integration of One Health as an Approach?

The specific recommendations that can help operationalize One Health are:

- One Health has to be viewed as an Approach for a Better Future and not as something that the West or Developed world is trying to put onto the Developing World.
- The collective consciousness needs to develop that it is about Converging to tackle Health Challenges of the future which affect Health of All.
- Integration of One Health as a specialized discipline with its inter-disciplinary background.
- There is a need to develop specific content of One Health for different Stakeholders who study it.
- Localization –
  - 1) Localization is extremely important for One Health because the concept of space and local context as well as specific conditions are different. Moreover, global community in terms of economy, resources, capacity are equal thus that needs to be encompassed while planning the specifics in One Health.
  - 2) The specific occurrences of localized outbreaks, epidemics, as well endemic infections are relatively more prevalent in developing countries which tend to contribute to high case fatality rate and endemic infections also contribute significantly to the global burden of disease. Thus, localized capacity building is extremely important along with collective capacity building.
- The convergence in terms of learning integration needs to occur, the Developed and the Developing Country need to learn from each experience situationally and integrate the findings in the global context for reference and replication for the future.
- It is vital that Country Level Preparedness as well as Decentralized Implementation has to be practiced.
- Capacity Building of specific District and Block Level for working with both Programmatic and Survey Data for specific policy formulation.
- Grassroot Functionaries in Health with a special reference to ANM and ASHA should be trained in the respective local languages with the content in the said language to increase the existing capacities.

It is apt to sum up that One Health in India is definitely a prospect for the future and now has moving towards being an Approach which possess significant scope of academia, research, training and policy and convergence, integration of these is required to meet operational challenges of One Health Approach in India.

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