

One Health in Action: A Holistic Approach to Global Well-Being

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Abstract

In an era marked by complex and interrelated global challenges, the concept of One Health has emerged as a beacon of hope. It serve as a holistic approach to addressing the intricate web of health concerns that span across human, animal, and environmental domains. This commentary explores the profound implications of One Health, a holistic approach to health that recognizes the intricate interplay between human, animal, and environmental well-being. It emphasizes that the health of these realms is interconnected, citing zoonotic diseases like COVID-19 as stark examples. By addressing health issues at their source, One Health demonstrates its potential to mitigate disease spread and environmental degradation. Additionally, it offers a roadmap for addressing global challenges, such as pandemics and climate change, through early detection, rapid response, and interdisciplinary collaboration. To achieve sustainable well-being, the commentary underscores the need for unified efforts across various sectors, highlighting initiatives like the Eco Health Alliance. Ultimately, embracing One Health paves the way for a future where global well-being becomes a tangible reality, unifying the destinies of humans, animals, and the environment.

Keywords: one health approach; zoonotic diseases; global wellbeing; one health in action

Introduction

One Health is not merely a buzzword; it's a fundamental shift in the way we perceive and address health. At its core, One Health recognizes that the health of humans, animals, and the environment is intrinsically linked. It acknowledges that the emergence and spread of diseases are not limited by species boundaries, and that environmental factors play a crucial role in shaping health outcomes. This recognition calls for a more comprehensive and interconnected approach to health management. To comprehend the power of One Health, one must first grasp the interconnectedness of health. Zoonotic diseases, those that transmit between animals and humans, exemplify this interconnectedness vividly. Diseases like COVID-19 and Ebola serve as stark reminders that pathogens do not discriminate between species. They can jump from animals to humans with ease, often with devastating consequences. Understanding these dynamics underscores the urgency of One Health [1]. Consider the example of Lyme disease, a tick-borne illness. Its prevalence in humans is intricately linked to the populations of small

mammals and the abundance of ticks in the environment. By addressing the health of these components holistically, through strategies like wildlife management and ecological preservation, we can reduce human disease incidence. Such examples underscore that tackling health issues at their source, whether in the animal or environmental realm, can have profound effects on human well-being [2].

Epidemiological Profile of Zoonotic Outbreak

For many years now, the world has experienced a tremendous and undeniable emergence of diseases that has galvanized the world's attention. The outbreak of diseases has been closely related to social and ecological changes [1,2]. However, the study of the relationship between animals, people and the environment and how it concerns their health is not new. Instead, it has become more important in recent years as more cases of endemic diseases arise. About two third of the emerging diseases are zoonotic and over 70% are considered to have originated from wildlife [3]. It is impossible to detach man from interacting with

animals. In fact, in our world today, the connection between people and animals has become closer than ever before as we now have pets at home, animals are visited in the zoos every day, while a few others even go as far as bringing pets to the classrooms or health facilities. However, with the persistent increase of Human-animal-environmental interaction, comes with critical consequences – The risk for new zoonotic diseases that has a tendency to affect both humans and animals which can negatively affect economies, food security and safety and global health. A study on the relationship between zoonosis and poverty was conducted while a list of the top ‘important’ zoonosis were made based on human morbidity, human mortality, impact on livestock production and severity in people [4]. Thirteen zoonotic diseases were on the top ladder and were found to be responsible for over 2.2 human deaths and 2.5 billion cases of illness every year. The outbreak of Ebola virus which left a devastating impact in the Western Africa region cannot be overemphasized. It is beneficial to note that an estimated number of 59,000 people die from rabies and leptospirosis respectively [5,6]. This can be likened to about five times the number of human deaths every year. The Middle East Respiratory Syndrome (MERS), SARS-like coronavirus, filoviruses and other emerging infectious diseases have been identified to be driven by wildlife. The pandemic disease of Covid-19 left a tremendous effect in our world at large and the question isn’t about if, but ‘when’ the next pandemic disease might strike again. As the question puts the world in a state of unrest, so is the need to embrace a holistic approach (One Health) that recognize the interaction between human, animal and environment, while it fights health issues by monitoring and controlling public health threats [7].

Adopting the one health approach for global well-being.

One Health's relevance extends beyond the realm of disease. It offers a comprehensive framework for tackling global challenges, including pandemics (zoonotic outbreak) and climate change. The COVID-19 pandemic, for instance, has exposed the vulnerabilities of our interconnected world. A disease that originated in bats and likely passed through an intermediate host to humans spiraled into a global crisis. One Health principles emphasize early detection, rapid response, and collaborative efforts across sectors

which is a vital roadmap for pandemic preparedness and global health security. In addition, one health through existing tools like vaccination to end endemic zoonoses can provide pragmatic approach to achieving many objectives to global health security. 75% of emerging infections are zoonotic in origin and one health has helped improved outbreak response, reduced burden of zoonotic diseases and enhanced global health security [3].

Moreover, One Health aligns with the urgent need for environmental sustainability. The health of our planet is intricately tied to the health of its inhabitants. Climate change, habitat loss, and pollution directly impact health outcomes. By recognizing this relationship, One Health encourages us to address environmental degradation as a health imperative [2].

Collaborative Efforts

Implementing One Health requires concerted collaboration among diverse sectors, including human health, veterinary medicine, environmental science, and policy-making. This multidisciplinary approach is challenging but essential. The creation of collaborative platforms, such as joint research projects and interdisciplinary teams, fosters innovation and ensures a unified response to health challenges. As the concept of One Medicine evolved into One Health, which prioritized the promotion of health rather than the treatment of disease, One Health has enabled physicians to understand that diseases are not just exclusively related to human medicine but veterinarians also have relevant knowledge and key information which must be shared in order to promote global health [10]. The collaboration and cooperation among physicians, biologists, veterinarians and other health workers lead to the prevention of certain diseases as prevention remains a better step to tackling health issues than the treatment itself [11]. In practice, veterinary medicine stands out as the leader of the One Health concept due to their ability to observe animals and their owners closely and identify diseases with zoonotic potential [12]. This enables them to understand the concept of One Health while understanding the importance of mutual cooperation than physicians [13]. Therefore, interdisciplinary collaboration in the One Health concept is relevant in order to understand and find ways to mitigate zoonotic diseases and other threats that might affect the health of people, animals, plants and our shared environment.

While the recent pandemic disease of Covid-19 emphasized on the need for the One Health approach, interdisciplinary collaboration remains at the heart of the One Health concept [14]. The National Institute for Public Health and the Environment (RIVM) is a typical example of an initiative that is committed to health and sustainability. By partnering with the European Centre for Disease Control (ECDC) and the European Food Safety Authority (EFSA), it has actively participated in some One Health projects such as the One Health EJP which is aimed at collaborating with health disciplines across all sectors to address zoonotic threat and antimicrobial resistance. Others include project COMPARE and EU-JUMRAI which detects and responds to disease outbreaks among humans and animals through the use of genome technology and reduces microbial resistance and healthcare associated infections respectively [15]. However, there are underlying complex challenges that exist which affect the One Health approach. Some of these challenges includes; poor information and communication between disciplines and agencies, inequitable funding for multi-sectoral engagement among others [16,17]. To handle such challenges, One Health relies on surveillance tools that can improve multi-sectoral collaboration within health systems. In addition, these collaborative efforts have the potential to prevent future pandemics and safeguard both human and animal health.

Conclusion and Recommendation

One Health is not merely a theoretical construct; it is a pragmatic and vital approach to safeguarding the well-being of our planet and its inhabitants. It reminds us that our destinies are intertwined, that our health is intimately linked with the health of animals and the environment. Embracing One Health means embracing a future where global well-being is no longer a distant aspiration but a tangible reality. This comprehensive commentary touches upon the key aspects of One Health, from its fundamental principles to its potential for addressing global challenges and achieving sustainable well-being. Ultimately, the power of One Health lies in its capacity to forge a path towards sustainable well-being. By recognizing the interdependence of health, addressing global challenges comprehensively, and fostering collaboration, we can create a world where health is not a privilege but a shared right. We therefore recommend

more implementation research and projects in this area.

Declarations

Conflict of Interest

All authors declared no any conflict of interest

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Data availability Statement

Data was collected from the prior findings.

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