

Mini Review

Why advocacy for the one health approach attract attention than its practical implementation

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Abstract

One Health is a holistic approach for investigation as well as for the control of human, animal, and environmental health problems. It comes with a multisectoral approach for the multifactor health problems and this made it to be more advocated. One Health is advocated in different regards like progressing a One Health approach to encourage health at the human-animal-environment interface, protecting the vulnerable population, and tackling inequalities, progressing research development for human and animal health, and the like. One Health is ideally much palatable but its practical implementation was not as simple as that. Some of the reasons for the failure of practical implementation of the One Health approach are the silos, i.e. siloed thinking, silos in education, siloed funding, as well as one's commercial interest, lack of communication among different relevant sectors, lack of trust of one on another and so on.

Introduction

All diseases by their very nature, particularly some of them are multifactorial and multi-sourced in terms of their origin and factors they involve to precipitate in a host animal, human, or environment. These complex diseases can best be tackled through a system that targets all the factors involved in the disease process. Besides these existing disease situations, the current disease trend has shown that at least one new infectious disease has emerged each year [1]. The majority of these emerged new infectious diseases have been zoonoses, with more than half of them originating from wildlife (Jones, et al. 2008) while the majority of the diseases recognized in humans are caused by zoonotic pathogens [2]. Nowadays, with the increased global movement of people and animals, commodities, and other materials, the global and across species spread of the disease has increased. The ever-growing human populations and the accompanying expanded land

use that resulted in environmental degradation, as well as intensified animal and other farming systems, and increased interaction between humans and animals (both domesticated and wild species), are other added factors on top of the natural complexity of the disease. These all worsen the global health status and act as key factors increasing shared risk among the animal, human, and ecosystem interfaces. Due to the increasingly globalized health determinants and outcomes and other reasons, there is a critical need for collective action to pursue more holistic approaches to control diseases at the interfaces of animals, humans, and the environment.

One Health ideology has come up with a more integrated and holistic approach to human, animal, and environmental health problems. In the current increasingly populous and globalized world, the One Health approach has received growing attention as it allows more effective prevention, control, and treatment responses. It promotes the potential added benefits to the



operationalization of each of the sectors of human, animal, and ecosystem or species they are dealing with. This is because, One Health promotes a transdisciplinary, collaborative whole of society approach towards global health.

Though One Health is an ideal approach for the transformation of the healthcare system, its implementation was so far proven a major challenge. Some of the things that hinder the proper implementation of the One Health system to its expected level are that the global level governance of One Health has been dependent on some key actors [2]. It was unable to identify a single example of a well-functioning, integrated zoonotic disease surveillance system across human and animal sectors [3]. That means they are all working in their respective silos against the collaborative work demanded by the One Health approach. To properly control the emerging diseases and health priorities that evolve into global and multi-sectoral issues, all public health professionals (from interventionists to advocates to researchers), must step outside of their silos [4]. Therefore, more strong evidence about the practical implementation of One Health is required for the future to advance its practicability. Otherwise, it can't truly become a way forwards for addressing health issues at the interfaces of humans, animals, and ecosystems.

Why one health attracts attention?

The current disease trends that involve humans, animals, and the environment have led to support for a more integrated and holistic approach to health problems. Therefore, One Health which is an integrated approach to tackle global health problems of these types nowadays has become a number one choice. One Health approach has the potential to provide the creative, impactful, and sustainable solutions required to overcome the magnitude and complexity of the existing global health issues. This is why the One Health approach has nowadays received growing attention among different stakeholders seeking more effective prevention, control, and treatment responses in an increasingly populous and globalized world [5-7]. Some of the specific reasons why One Health attracts attention are:

1. One health approach promotes health at the human-animal-environment interface: The One Health approach promotes interdisciplinary collaborations to more holistically understand and more effectively act against public health threats. One Health approach recognizes the integral connections of humans, animals, and the environment with people's health and well-being. It has also been identified that the search for human, veterinary, and environmental health issues separately leads to an incomplete understanding of disease risks and, therefore, missed opportunities for mitigating and adapting to these problems. The One Health measures could come up with solutions to support primary prevention of such problems, or at least their earlier detection, enabling more timely and effective containment and response to public health threats at the human-animal-environment interface. By so doing, the One Health approach promotes the health of humans, animals, and the environment all at once.

2. Zoonoses control: One Health approach enables earlier detection of zoonotic diseases and thereby earlier reporting. These further create opportunities for the control of the transmission of zoonotic diseases from animals to humans. In this regard, One Health is a cost-effective approach in reducing the burden of endemic zoonoses. Because One Health is an interdisciplinary approach for the surveillance of zoonotic diseases and it allows a whole round approach targeting an animal or environmental reservoirs and infection sources. These could finally pave the way to promote public health.

3. Protecting vulnerable population and tackling inequalities: Rural communities are at the greatest risk from endemic zoonoses but unfortunately, they are not covered by essential health services. Different social factors usually impact the accessibility of healthcare in this setting and thus results in inequality in healthcare provision. But the One Health intervention measures will help buffer the impacts of the social drivers of inequality in healthcare provision under these social settings. The One Health intervention measures are thought to be more effective and equitable. This is because One Health measures are targeted to prevent zoonoses at their source than relying on treatments or cures and therefore benefit all those who are epidemiologically connected to the source of infection by reducing the force of infection from the animal or environmental reservoir.

4. Advancing research progress for human and animal health: The complex health issue that involves humans, animals, and the environment all at once calls for multidisciplinary research for better output. In this regard, One Health has come up with an approach that polls individuals across professional spectrums to a team to work in an integrated and holistic manner to provide a more comprehensive understanding of the problem and bring potential solutions than would be possible with siloed approaches. This is believed to advance research progress for human, animal, and environmental health. Generally, it can be concluded that due to the above-mentioned reasons and similar benefits, the One Health approach attracts the attention of those concerned with global and local health issues.

Challenges in practical implementation of one health

The challenge of practical implementation of One Health roots from the unequal understanding of its definition and different views about its concepts among professionals from different sectors. This absence of a clear perception about One Health when referring to it among different health sectors remains a root cause for the challenge in its practical implementation despite the great advocacy for it. Implementing One Health without having a shared agreement became a challenge and varying interpretations of what the concept means in practice remains a barrier to any discussion on its implementation.

The other thing challenging the practical implementation of One Health is the priority issue. There is no consensus regarding which specific diseases the approach should focus on. Some prefer to focus on emerging and re-emerging zoonoses



while others are much concerned with transboundary diseases with pandemic potential, still, others call for a strong focus on endemic diseases of public health and economic importance. Also challenging are trends towards an even broader definition of One Health to include the effects of global climate change on human, animal, and ecosystem health. Not only this, but One Health was also expected to enclose food- and water-borne infections, health risks of environmental toxins, and chronic conditions such as cancer, obesity, and aging as well as companion animals' welfare [2].

Institutional proliferation, fragmentation, competition for scarce resources, lack of an overarching authority, and donor-driven vertical programs are also factors that affect the practical implementation of One Health. People fail to cross professional, disciplinary, and institutional boundaries, and to work in a more integrated fashion. So, simply grafting One Health onto existing institutional structures of Global Health Governance (GHG) is likely to end up with failure. In a world where there is a high degree of reductionism and fragmentation and where there is no clear cut between vertical (disease-focused) and horizontal (systems-focused) approaches to disease control, it has been a challenge to influence people to holistically approach healthcare provision. Fragile governance of One Health at the global level that not provide a useful framework for addressing the types of disease problem that involve complex interactions between people, animals, and the environment and also not offer a way to develop and implement more effective, appropriate and acceptable strategies for disease control and prevention remain a problem in the implementation of One Health approach in disease control.

Under-resourced One Health and not being supported by the systematic allocation of resources for integrated national or multinational programs is also a challenge. Due to the absence of convincing economic arguments in support of the One Health approach, the health sectors (both human and animal health) remain separate, with individual budgets and agendas. There is also a lack of agreement on leadership issues, the problem of resource allocation and task distribution among partners; and insufficient indicators and measures of health. All these and other related issues are among problems that hinder the practical implementation of One Health as to the expected level and put One Health looks ideal and unimplemented under the existing institutional structures though One Health is widely advocated.

Conclusion and recommendations

One Health is an ideally comfortable approach to address the complex global health issues which are typically signifying the current global health status. This is why One Health which was originally intended as a strategy to strengthen surveillance and prevention of emerging and re-emerging zoonoses, through time comes to incline to include other extended areas of health issues. One Health is used to promote health at the human-animal-environment interface, enables earlier detection of zoonotic diseases and thereby earlier reporting and by so doing create opportunities for the control of the transmission of zoonotic diseases from animals to humans, protect the

vulnerable population, and tackle inequalities in health care provision, advance research progress for human and animal health and many other.

The suitable and effective work environment that the One Health approach creates made it to be easily accepted, preferred, and advocated. The acceptance of a closer interface between human, animal, and environmental health became inertia for One Health advocacy that encourages the collaborative effort of multiple health science professions for effective healthcare provision. On the one hand, this paves a way for the gaining acceptance of One Health globally within a short time. On the other hand, the early greater acceptance of One Health made it to be tried to be implemented before the foundation of the concrete basis for its practicability.

The unequal understanding of its definition among professionals from different sectors, absence of consensus regarding which specific diseases the approach should focus on, institutional fragmentation, competition for scarce resources due to absence of the systematic allocation of resources for integrated national or multinational programs that put it to be under the influence of donor-driven vertical programs, lack of an overarching authority and simple grafting of One Health onto existing institutional structures of Global Health Governance (GHG), failure of people to cross professional, disciplinary, and institutional boundaries to work in a more integrated fashion and holistically approach healthcare provision that avoids the health sectors (both human and animal health) from remaining separate, with individual budgets and agendas and the like are challenges that put the implementation of One Health under question.

Generally, it can be concluded that One Health has been challenged for its practical implementation from its early emergence. The implementation of One Health faces a problem from its very definition, continued with priority issues and further aggravated by the siloed thinking and acting that remained a difficulty in merging and collaborating professionals cross-sectorally. This is because the world shape people to deconstruct everything and to look inwards than to look at the bigger picture of dealing with diseases shared between animals and humans as well as the environment. All these have been challenges for the implementation of effective structural collaboration and coordination between human, animal, and ecological sectors in control of shared diseases, and due to these, complex diseases that involve the animal, environment, and human remained a problem of humankind.

Recommendations

- There must be one independent overarching One Health authority just like WHO and FAO, or even enclosing them, rather than simply grafting it onto existing institutional structures of global health governance
- The One Health institutions should be built from the ground up with a One Health mentality that has a stake in disease control
- The then founded independent One Health institutions should be supported with sufficient funding



- Collective actions should be strengthened across sectors by avoiding dysfunctions that hinder effective healthcare provision at the global level.

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