

ONE HEALTH-AN INTRODUCTION

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Earth is house full of diversified ecosystem. Animal kingdom has excelled in survival according to the environment of earth. Each and every species surpass themselves yet intermingled to each other. We humans and animals share very close relation while utilizing all environmental aspects. As a veterinary student I'm focusing on health aspect as it embraces almost all other aspects. Health is most crucial and important part for sustainability of life on earth. That is why one health issue is globally emerging.

According to CDC (Centers for Disease Control and Prevention), one health recognizes the health of people is connected to animals and the environment. The goal of one health is to encourage the collaborative efforts of multiple discipline to monitor working locally, nationally, and globally- to achieve the best health for people, animals, and our environment. Multiple discipline includes expertise from ecology, veterinary, human medicine and public health.

One Health is the ecosystem in which healthy people, a healthy environment and healthy animals work in balance for healthier life.

Basically humans and animals consume the environmental resources together. The food chain embraces each creature of environment along with its resources. Animals are primary consumers while humans depends upon both animal and plant products. As well as from the beginning of civilization animals have been domesticated for various purposes. There is consistent and constant interaction between humans, animals and environment. So any disturbance on one factor can bring avalanche over all three aspects. Here one health stands unifying and representing importance of harmony between human, animal and environment health.

At current scenario, at least 75% of emerging and reemerging diseases are either zoonotic or vector-borne. Recent global diseases outbreaks like Ebola and Zika show the impact

human/animal disease spread can have on society. As well as, antimicrobial resistance issues have also contributed the severe impact on global health. Meanwhile our enormously increasing population is overcoming natural resources by 60% while facing an increasingly volatile climate. All of these aspects are enough to draw attention of scientists and expertise towards one health.

In daily livelihoods, people consuming undercooked animal products (milk, meat, cheese, bacon, sausages, etc.) are prone to diseases like brucellosis, tuberculosis, porcine cysticercosis, pasteurellosis, anthrax etc. The constant context and exposure to animals result in various diseases or may induce the evolvement of new pathogenic strains. Our hygiene practice also plays major role when we're raising animals. Diseases like Rift Valley Fever causes blindness, trypanosomiasis, rabies, avian influenza, bird flu, swine flu etc. are also danger to public health as they are transmitted from animals to humans. The climatic conditions like disasters, natural calamities, volcanic eruptions etc. also plays vital role. The loss of animals and abundance of dead carcasses become chief source of diseases.

According to OIE, diseases which are mainly transmitted from person to person also circulate in animals or have an animal reservoir, and can cause serious health emergencies, such as the recent epidemic of Ebola virus. These risks increase with globalization, climate change and changes in human behavior, giving pathogens numerous opportunities to colonize new territories and evolve into new forms. Such bio hazards are causing loss of tremendous livestock before they enter our food system, also wasting input measures. About 20% of livestock are lost to diseases. An estimated 2.9 trillion pounds of food are wasted across the food chain while hunger is still burning issue. If this continues ecosystem will be headed towards destruction.

One Health approach is based upon huge involvement of expertise. It is a solution for safer nutrition, ecosystem and healthy harmony between human, animal and environment. Currently the group is focused on resolving public disease like Rift Valley Fever, Zika virus outbreak, Rabies elimination, etc. They have produced vaccines or medicines or any preventive measures for both animals and humans. The delivery of vaccines and medicine to animals and humans at same time can bring out strategic solutions to disease outbreaks and Prevention. Also the antimicrobial resistance is also major issue handled with proper skills.

One Health solution collectively preserve efficacy of tools used in humans and animals medicine which limits the spread of diseases. The reduction in livestock mortality and improved productivity improve human nutrition ensuring people to have safe food choices. As well as conservation of resources side by side boosting economics and livelihood with sustainable environment are powerful aspects of one health. Our companion, our pets, who need to be disease free and pest free, as they are integrated to our lives, help in decrease anxiety, blood pressure and stress. They can also improve social skill of kids. If they're sick we'll be sick as well. In addition to these, human can combat diseases like obesity and diabetes with props nutrition. So healthy animals in healthy environment are source for healthy and hygienic life of humans. That is how one health is important at all.

One Health approach is currently in action under European Commission, the US Department of State, US Department of Agriculture, US Centers for Disease Control and Prevention (CDC), World Bank, World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO), World Organization for Animal Health (OIE), United Nations System Influenza Coordination (UNSIC), various Universities, NGOs and many others.

From our level, we can maintain our animals a healthy hygienic housing system with proper feedings and vaccination schedules as well as minimal stress and pain and lots of love. Also follow exercises, vaccination in time, good food consuming habits, hard works, family planning and sustainable utilization of environmental resources.

Reference

- <http://www.onehealthglobal.net/what-is-one-health/>retrieved on 5th November
- <http://www.oie.int/en/for-the-media/onehealth/>retrieved on 5thNovember
- <https://www.cdc.gov/onehealth/>retrieved on 5th November
- <http://gcgh.grandchallenges.org/challenge/one-health-concept-bringing-together-human-and-animal-health-new-solutions-round-11>retrieved on 5th November
- Baker, S.B.; Wolem, A.K. The Benefits of Human-Companion animal interaction: A Review: J. Vet. Med. Ed. 2008, 35,487-495.