

# ONE HEALTH: ISSUES

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The concept of one health dates back to prehistoric era of well-known Greek physician Hippocrates, but its importance is felt more these days. In simple words, one health is a simple phase of very complicated three aspects; human health, animal health and environment. One health endeavors on well-being of all of these three aspects which can be and needs to be done through collaborative efforts from grass root level. Making motto '*One Health, One Planet, One Future*' more achievable, relatable and attainable; every issues encountered in the past, successive scientific examination and various theories are studied and implemented thoroughly in new plans and policies.

Well, '*One World, One Health*' is that one complete phrase which emphasizes on well-being of both human and animal health along with environment side by side in the world. The three major aspects of one health can be considered as the three points of a triangle known as epidemiological triangle, which depends upon one another either directly or indirectly. Any disturbances in balance between these three components causes catastrophic changes. Epidemic, Endemic or Pandemic diseases are those catastrophic changes which invades human and animal population living in an environment.

Varieties of emerging diseases are found to be linked between human and animal due to their close contact and food they eat. Diseases of animal origin can be transmitted to human such as Avian influenza, Rift valley fever and Brucellosis, which have a colloquial chance of sequel on public health too. Bolt from the blue, some of the diseases which are found to be transmissible from human to human also circulate in animals or have an animal reservoir and cause serious health hazards too. The perfect example of this is the recent epidemic of Ebola virus. The virus

which seriously threatens present status of living human resides and gains its pathogenicity inside Rhesus monkey.

Some of the chronic diseases such as heart disease, cancer, asthma, diabetes and arthritis are also found to be prevalent in animals as humans do. For example fear induced heart failure was described in wildlife about 30 years before it was recognized in humans.

In ancient Greek people used to understand, evaluate human diseases by dissecting live and infected animal. Thus the term *comparative medicine* came forward. Comparative medicine is the study of disease process across species and is based on the study on naturally occurring disease of animals that also somehow affects humans.

Now moving towards the third important aspect of one health and third point of epidemiological triangle i.e.; the environment. Ecosystem is that integral part of environment where the practical and life changing interaction between animals and humans takes place. Neither human nor animal can survive without environment. From the day of birth to the last day of their life, each and every living organism have that special relationship with their surroundings. Basically, the relationship between these aspects is limitless, boundless and unexplainable. Paradoxical, sometimes the same environment becomes graveyard of living organism and sometimes the center of holocaust too.

Climate change, Global warming, Urbanization, Globalization has an enormous and massive effect on both animal and human population. The chance of spread of very precarious diseases within the human and animal population increases with globalization, climate change and human behavior, giving pathogen numerous opportunities to colonize new territory and evolve into new form. Antigenicity and pathogenicity of the pathogen increases drastically with immunogenicity of animal and human being the same. Which concludes in the fact that eventually humans and animals are more prone to diseases than usual because of lack of required defense system. Alongside, more and more complex treatment is required with modified and knotty medicinal therapy. On the other hand these sophisticated therapies produce deleterious effect on human and animal health.

One health is a multidisciplinary collaborative effort formed basically to solve global and environmental health challenges. It is an approach to ensure the well-being of people, animal and environment. It makes certain that the balance between these three aspects of the epidemiological triangle remains without any disturbances. In protecting animal health and welfare, they meaningfully contribute towards improving human health as well as food safety and security. That's the reason why; they need effective and appropriate method to control and prevent various animal diseases and must actively and jointly work with wide range of people of various sectors such as Physician, Osteopathic Physicians, Veterinarians, Dentist, Nurses and others.

### **FACTS:**

- 60% of existing human infectious diseases are zoonotic.
- 5 new human diseases appear every year out of them three is of animal origin.
- At least 75% of emerging infectious disease of humans (including Ebola, HIV and influenza) has an animal origin.
- 80% of agents with potential bio-terrorist use are zoonotic pathogen.

Thus, in order to protect people in most economical way we must control zoonotic pathogen at their animal source. Eventually, various plans and programs must be implemented, if we are needed to cherish public health. All executing plans and policies must be coordinated at *human-animal-environment level* which is what one health is all concerned about.

Hence, concept of one health makes world better place to live in for all, where life each and every living organism is considered equal. As per the saying goes “Life’s not just about being alive but being well “by Martial.