

Experts want One Health strategy for humans, animals

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For every human on earth, there are almost four domesticated animals. On our increasingly crowded planet, most humans are living in close proximity with a variety of livestock such as cattle, goats, pigs and horses. And we are exchanging our diseases freely with each other which is becoming a major health hazard. So why not look at such diseases from the perspective of both humans and animals and find common solutions?

Many people around the world have been asking these questions. And they have now come to the conclusion that we need a One Health policy, that "integrates expertise from human, animal and environmental health using biomedical science, epidemiology, economics, ecology and social sciences."

So experts from around the world converged in mid-July at Hyderabad to tackle these common issues head-on at an International Conference on Host-Pathogen Interactions. Organized by the publicly-funded National Institute of Animal Biotechnology (NIAB), it was hosted by the University of Hyderabad (UOH). NIAB is located on the UOH campus.

Outlining the emerging concept of One Health, Dr Purvi Mehta, head-Asia, International Livestock Research Institute (ILRI) of the UN system, New Delhi, said there are some 24 billion livestock in the world and over a billion people, mostly in the developing countries, are depended on them for their livelihoods.

Though there are dozens of diseases that emanate from animals, zoonoses as they are called, 13 of these wreak havoc affecting about 2.4 billion people annually. These zoonoses claim about 2.2 million lives a year and kill 12-14 percent of the livestock population. Dr Mehta said experts have estimated that the world suffered losses of more than \$80 billion due to zoonotic diseases between 1998 and 2009.

In fact, the 2002-04 SARS (Severe Acute Respiratory Syndrome) that originated from fruit bats, civets and then spread to animals and humans alone cost the world more than \$40 billion and six other diseases such as West Nile Fever, NIPAH virus, Rift Valley Fever made the world poorer by another \$40 billion in lost economic output and unnecessary treatment costs, according to estimates by the World Bank.

What is more alarming now is the fact that almost 60 percent of human diseases are shared with animals. And nearly 75 percent of all the emerging infectious diseases are zoonotic in nature.

Dr Girish Sohni, a public health expert, revealed that in India no joint surveillance on zoonotic diseases are done systematically. Most health surveys focus on animals or humans separately.

For example, the antigen used to test for tuberculosis in humans is available in plenty. But there is no specific TB antigen for animals. TB outbreaks are reported routinely from among animals in many regions and even in zoo enclosures. Very little is done to study and control these outbreaks. Many experts, who spoke at the conference, called for interdisciplinary co-operation and setting up of joint mechanisms to tackle these emerging zoonotic diseases on a war-footing. A National One Health policy is the need of the hour, experts said.