

Integrated Vector Pathogenesis

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Editorial Note

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A novel coronavirus, designated as the novel COVID-19, emerged in Wuhan, China, at the end of 2019. As of January 2020, at least 800 cases had been diagnosed in nine countries: China, Thailand, Japan, South Korea, Singapore, Vietnam, Taiwan, Nepal, and the United States. 26 fatalities occurred, mainly in patients who had serious underlying illness. Many details of the emergence of this coronavirus like its origin and ability to spread among humans which is still unknown and randomly increasing number of cases appear to have resulted from human-to-human transmission. Given the severe acute respiratory syndrome coronavirus (SARS- CoV) outbreak in 2002 and the Middle East respiratory syndrome coronavirus (MERS-CoV) outbreak in 2012, 2019-nCoV is the third coronavirus to emerge in the human population in the past two decades which has put global public health institutions on high alert. This study reviews the role of indigenous knowledge and integrated vector management for controlling vector-borne diseases of public health importance to provide summarized information to the beneficiaries. Now a day's vector-borne diseases are the major illnesses of humans and animals. Many of vector-borne pathogens affect humans are of zoonotic origin. Reservoir hosts of these pathogens include wildlife, livestock, and companion animals. Important vector-borne diseases with zoonotic potentials include Leishmania, Dengue, Nipah virus, Rift Valley Fever, African Trypanosomiasis, Chagas disease, Yellow Fever, Japanese Encephalitis, Onchocerciasis etc. These vector-borne diseases pose an increasingly wider threat to global public health, both in terms of the number of people affected and their geographical spread. For many vector-borne diseases, there are no vaccines, and their drug resistance characteristic is an increasing threat to public health. To achieve progress and stability in animal and human health, vector-borne diseases have to be controlled effectively.

In olden days, people traditionally practised various indigenous knowledge to control insect and other vectors transmit diseases between animals and humans. Indigenous knowledge expresses traditional knowledge, rural knowledge as well as ethnoscience. Studies indicate that veterinary medicine, as practised today, has its roots in herbal medicine, which has been practised since ancient times. As many vector control methods are effective against multiple diseases, they can be integrated to combat multiple diseases at once. Finally, we recommend Integrated Vector Management as the process for developing and implementing strategies of WHO for controlling vectors besides using indigenous knowledge. East respiratory syndrome coronavirus (MERS-CoV) outbreak in 2012, 2019-nCoV is the third coronavirus to emerge in the human population in the past two decades which has put global public health institutions on high alert. This study reviews the role of indigenous knowledge and integrated vector management for controlling vector-borne diseases of public health importance to provide summarized information to the beneficiaries. As many vector control methods are effective against multiple diseases, they can be integrated to combat multiple diseases at once. Finally, we recommend Integrated Vector Management as the process for developing and implementing strategies of WHO for controlling vectors besides using indigenous knowledge. wildlife, livestock, and companion animals. For many vector-borne diseases, there are no vaccines, and their drug resistance characteristic is an increasing threat to public health.