Management and prevention of pandemic flu: One Health approach

About 75 recently emerging infectious diseases that affect humans are caused by various zoonotic pathogens including influenza viruses such as H1N1, H5N1 and H7N9. Pandemic influenza outbreaks significantly highlights about the role of One Health (OH) approach where expertise in human, animal and environmental health combines together with multidisciplinary strategies solve interrelated problems to adapt effective collaboration, communication, management and evidenced-based preventive measures. Avian and Swine flu are examples of global health concern that justify exploring the role of OH enhancing optimal preventive outcome and to promptly disseminate epidemiologic data sharing among various stakeholders including academic institutions that are traditionally well equipped to collaborate with the internal and external stakeholders, especially in areas such as human, veterinary and laboratory surveillance practices. The human-animal-ecosystem interface plays a critical role in spread of emerging and re-emerging infectious disease including influenza viruses. As the world population is raising especially urban populations, we are facing an increase in poultry and swine populations globally by necessity and therefore, increased in the frequency of zoonotic influenza viruses' infections among human populations are more likely. One Health approach which is formulated to mitigate and curb public health best practice for the triple threats can result in direct benefits in human health. Furthermore, adaptation and incorporation of such approach will significantly impact preventive measures as well as identification of risk factor and risk assessment. Major health organizations, such as the World Health Organization (WHO), Centers for Disease Control and Prevention (CDC), the US Institute of Medicine (IOM) and the European Centers for Disease Control have unanimously concluded that that more action and information on influenza transmission and prevention is internationally critical to pandemic planning and management. Human health is directly and inextricably linked to the health of animals and ecosystem and influenza viruses are no exception to this pivotal link. One Health collaborations and implementations can help to effectively minimize the burden of disease including economic burden. Therefore, improving international public health infrastructure for zoonotic disease control and prevention through OH approach provides advantages and benefits in controlling zoonotic diseases caused by influenza viruses.

Biography

Reza Nassiri is an Associate Dean of Global Health, Director of Institute of International Health, Professor of Clinical Pharmacology, Professor of Family and Community Medicine and Lecturer in Global Health, Infectious Diseases and Tropical Medicine at Michigan State University College of Osteopathic Medicine. His research interests focuses on Clinical Pharmacology of HIV/AIDS & TB, prevention and control of infectious diseases, neglected tropical diseases, community health, global health and socio-ethical determinants of health. He works on international public health issues and has expertise in global health education, research, policy and governance. He has made contributions in various fields of medical sciences including clinical investigation and health education. On the basis of his extensive experience and expertise in HIV/AIDS and TB, he developed Clinical Research Programs in Brazil, South Africa, Haiti, Dominican Republic and Mexico.

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