

Journal Club

The One Health Concept

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For centuries, it was assumed that human health exists independently of the health of the planet. Current, growing scientific evidence has revealed a deeply intricate and symbiotic relationship among three major global issues; environmental pollution, the loss of biodiversity, and climate change. These are now understood to be powerful driver of disease emergence, spread and severity. The paradigm shift to the “One Health” concept recognizes that the health of people is linked to the well-being of animals and the quality of the environment.

Environmental pollution may affect the immune system, making living species more vulnerable to infectious diseases. The COVID-19 pandemic highlighted that link.

Biodiversity loss, according to the dilution effect theory, can increase disease transmission. When biodiversity declines, “super-spreader” species that are effective at transmitting pathogens, such as rodents and bats, increase the risk of zoonotic spillovers.

Finally, climate change exacerbates these issues by expanding the geographical range of disease vectors, such as mosquitoes, and by creating extreme weather events that can lead to outbreaks of waterborne diseases.

Hence, a multidisciplinary approach is fundamental to addressing these global challenges as well as the need to raise public awareness. Among these, artificial intelligence-based technologies could play a leading role.

Document Cited:

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