



Title: Interdisciplinary pandemic preparedness: A paradigm for the twenty-first century

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Abstract:

Pandemic preparedness has traditionally focused on the ability of health systems and governments to react in the event of a novel infectious outbreak. The COVID-19 pandemic has exposed flaws in the global community's ability to implement that approach. However, concern about the approach itself predates this pandemic. Indeed, the challenge that the world has faced this year can be viewed as yet another of dozens of zoonoses and emerging infectious diseases (EIDs) that have threatened human populations in recent decades. In this presentation, we outline alternate perspectives on how to control and mitigate the many interconnected threats that EIDs pose — especially those that are proactive rather than reactive, and those that have gained traction in disciplines other than those that have traditionally been centre stage in public health planning.

The most noteworthy of these perspectives are the following five: 1) climate change and ecosystem disruption increase the global risk of vector-borne disease, as well as the risk of novel zoonotic emergence; 2) potential EIDs can be pre-emptively identified, studied, and mitigated, especially through improving our pathogen surveillance and our understandings of animal pathogens and taxonomic risk; 3) industries involving animals can be reformed so as to reduce the risk of zoonotic transmission, especially through changing how animals are raised and transported; 4) population health can be improved to reduce syndemic risk from EIDs; and 5) the engagement of social science in EID research can help improve the identification of and response to the threats that EIDs pose.