Short communication
Volume 6:3,2021

International Journal of Public Health and Safety

ISSN: 2736-6189 Open Access

Global health security: A Short communication

Alexander Birbrair *

Department of Pathology, Assistant Professor, Federal University of Minas Gerais, Brazil

Abstract

"Global health security" is three simple words, but they contain so much meaning. A century of modern scientific studies on infectious diseases such as yellow fever, malaria, and, most recently Zika virus are continuing. SARS and swine flu served as a wake-up call, with viruses crossing species barriers with dramatic consequences. The Ebola outbreak in West Africa has galvanised the WHO, the international NGO and donor community, as well as countries. The threat of new and re-emerging infectious diseases most of them are zoonotic.

What is global health security?

Stopping the spread of infectious diseases and antimicrobial drug resistance across borders, leading to a multicounty event, is characterised as "global health security." It began as a notion in February 2014, with the announcement of the Global Health Security Agenda (GHSA), a commitment by a group of 64 countries, international organisations, and non-governmental organisations to address natural, accidental, man-made disasters and deliberate biological threats.

The GHSA assesses a country's health security and then agrees on a work package to strengthen disease surveillance/reporting systems, health regulation implementation, and outbreak response capacity.

Emerging infectious diseases and cities

I didn't want to take the easy way out when we were talking about the 'cities' theme that runs through the entire world. It's simple to connect cities and disease; I could look at the plague or cholera and be completely within the theme's scope. Instead of recalling a recent paper just read about the role of cities in the spread of new infectious diseases. Commonly, we think the region's most likely be affected by the emergence of infectious diseases would be the developing nations but in fact very few studies have looked into the spatial arrangement of emerging infectious disease reporting.

This has major consequences for surveillance and research funding, as most developing countries lack the resources to effectively manage their existing health burdens, let alone monitor for and respond to new problems as they emerge. As a result, understanding how diseases emerge, where they emerge, and what we can do about it must be prioritised.

When we think of new infectious disease outbreaks, pictures of diseases emerging from the jungle also come to mind. While this isn't necessarily incorrect (as we'll see), it's also not exactly correct. It all depends on how you define the term "emerging." Jones et al. describe an emerging infectious disease as an original case or cluster of cases representing newly developed strains of existing human pathogens, entirely new pathogens, or re-emergent pathogens in their paper "Global trends in emerging infectious disease." In this way, a new strain of antibiotic-resistant E. coli is equated to SARS or the re-emergence of M. tuberculosis in a population where the disease had previously been eradicated.

When seen in this light, human population density was thought to be the most important factor in the spread of infectious disease. This is consistent with previous theories that cramming human's together makes disease transmission easier, allowing even weaker emerging diseases to spread and adapt to the new human host. The link between human population density and the emergence of infectious diseases, as Jones et al. point out, reveals a hidden cost of human economic growth. However, there were some other fascinating discoveries.

Types of emerging infectious diseases

The emerging infectious diseases were classified into four groups: zoonotic (wildlife), non-wildlife, drug-resistant, and vector-borne. The distinction between wildlife and non-wildlife zoonotic disease is important because it distinguishes infectious disease that emerges from wild animals from infectious disease that emerges from pets.

Away from the cities, entirely new infectious diseases emerge from nature. Looking at Jones et al., data again, it appears that among the key factors they looked at, the two most closely linked to the emergence of zoonotic diseases from wildlife were human population density and the region's biodiversity. The more diverse animals that come into contact with a large population of humans, the more likely it is that some of those diseases will cross species boundaries. This data supports the widely held belief that zoonoses from wildlife are the most serious and rapidly spreading threat to global health among all emerging infectious diseases.

This is especially important to keep in mind when allocating funds for emerging infectious disease surveillance and monitoring. Jones et al. developed risk maps of the world based on the data they gathered for their four categories of emerging infectious disease. The data is outlined in the paper, and it would take a better statistician than me to dissect it all, but if they're correct, we're looking for emerging infectious diseases in the wrong places. According to their forecasts, infectious disease outbreaks are most likely to occur in rapidly urbanising developing countries, particularly India, eastern China, and southern Africa.

There appears to be a shift in the types of diseases that arise as areas become more urbanised. As the human population density in the area grows, the first infectious agents appear to transition from the area's wildlife populations to the human population. Infectious agents emerge as the environment becomes more evolved as a result of human activities within the city, whether it is medical or agricultural antibiotic use, or simply domesticating animals and living with them in our homes.

The takeaway message for me was that we need to reallocate resources to the rapidly urbanising developing world in order to ensure that newly

***Address for Correspondence:** Alexander Birbrair, Department of Pathology, Assistant Professor, Federal University of Minas Gerais, Brazil. Tel +32466900451; E-mail: editor@hilarispublisher.com*

Received 07 March, 2021; **Accepted** 17 March, 2021; **Published** 25 March, 2021

emerging diseases, especially zoonotic diseases spread by wildlife, are identified early and effectively dealt with. Although there is a case to be made for stopping urbanisation and encroachment on wild habitats as one way to prevent zoonotic diseases from emerging, understanding the nature of their emergence allows us to plan, predict, and eventually take steps to reduce the impact of emergent infectious diseases. In the future this could prevent the spread and subsequent and persisting morbidity and mortality of the next HIV, SARS or multi-drug resistant tuberculosis.

References

1. Kate E Jones, Nikkita G Patel, Marc A Levy, Adam Storeygard, Deborah Balk, et al. "Global trends in emerging infectious diseases". *Nature*, 2008; 451: 990-993.

How to cite this article: Alexander Birbrair. "Global health security: A Short communication". Int J Pub Health Safety 6 (2021): 220