

“Epidemics in a connected world” can come to you

Infectious disease epidemics may be on your mind again given recent reappearance in the news of Ebola fever, this time starting with rural cases and then reaching an urban area in the Democratic Republic of Congo. Epidemics and pandemics arise not only due to a pathogen; they also have root causes in and subsequent effect upon social, environmental and economic conditions within and between countries (Garrett, 1995, 2000). Their containment relies upon investigation, treatment and control measures conducted by teams of allied health professionals. Newly emerging diseases continue to challenge disease detectives (Levitt, 2013), and often arise from animal sources.

How do diseases like this spill over from animals to humans? What are the impacts of habitat fragmentation and diversity loss, urbanization and global travel? Who are the people who play many different roles in the global fight against epidemics, from identifying their animal origins to developing vaccines and other interventions to help prevent the next one? Opened for three years in May, a new exhibition at the Smithsonian’s National Museum of Natural History examines the human ecology of epidemics (<https://naturalhistory.si.edu/exhibits/outbreak/>) from the Nipah virus to SARS and HIV. Those fortunate enough to attend the “Outbreak: Epidemics in a Connected World” exhibition will see how viruses can spread from animals to people, why some outbreaks become epidemics and how people in different disciplines and countries are working together to stop them. For those unable to visit Washington DC in person, because outbreaks are a global health threat the museum is offering a free “pop-up” version that communities worldwide can print and display. It includes guidelines and templates for translation and customization, enabling people in all countries and settings to have effective communication tools about infectious diseases and the One Health movement. The “pop-up” version features a flexible format (to use all or just a selection of its 15 printer-ready graphic panels), customization (multilingual formats and drop-in templates to tell the stories that resonate best with one’s own community), community participation (options to incorporate your own images and feature local heroes with success stories), supplementary educational materials (audio, video, text and image resources to use inside and outside classrooms) and captivating media displays. More information about the pop-up kit and its availability can be obtained from Audrey Chang at the Smithsonian (ChangA@si.edu). This is an opportunity to share knowledge that raises awareness about pandemic risks to keep everyone safer in today’s connected world.

One of the exhibition sponsors, the American Society for Microbiology, also offers on its website a wide range of lesson plans designed for kindergarten through grade 12 (www.asm.org/index.php/educators/k-12-classroom-activities). These detailed resource materials also can be downloaded without charge. Some provide general orientation, some teach about beneficial microbes, others about pathogens, some cover laboratory techniques and one teaches outbreak investigation.

These are important tools to motivate and educate. They can help strengthen everyone’s interest in public health, promote community support, and motivate students to become the next generation of public health professionals. Organizations like the Smithsonian and the American Society for Microbiology, and all the sponsors of exhibitions like this one, should be commended for making such valuable resources available without charge and on a global scale.

David Birnbaum and Michael Decker



References

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- Levitt, A.M. (2013), *Deadly Outbreaks: How Medical Detectives Save Lives Threatened by Killer Pandemics, Exotic Viruses, and Drug-Resistant Parasites*, Skyhorse Publishing, New York, NY.