

Rapid development in Central Africa increases the risk of infectious disease outbreaks

August 23 2018



Map illustrating areas of primary human infections of Zaire ebolavirus including the recently contained outbreak with its epicenter in the Bikoro region; the

ongoing outbreak in the North Kivu region of the DRC, and the density of road construction; is shown in red. Credit: NIAID

The Central Africa region is experiencing rapid urbanization and economic growth, and infrastructure development. These changes, while generally positive and welcome, also make the region more vulnerable to explosive infectious disease outbreaks, according to an international group of scientists. Writing in the *New England Journal of Medicine*, the authors, all of whom have field research experience in the region, note that efforts to build up the health care infrastructure in Central Africa are critically needed to mitigate or prevent a large outbreak of Ebola or other infectious disease in the region. The authors represent 12 different organizations, including the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health.

Citing the example of the 2013-2016 Ebola [outbreak](#) in West Africa, they note that Liberia, Sierra Leone and Guinea all have large, urban and mobile populations. Among other factors, this enabled the Ebola virus to quickly spread through these countries and overwhelm their limited [health care](#) infrastructures, resulting in more than 28,000 cases of Ebola virus disease and 11,000 fatalities.

Through their Central Africa field work over several years—primarily in the Republic of the Congo and the Democratic Republic of the Congo (DRC)—the researchers have observed what they describe as the world's fastest rate of urbanization. By 2030, they write, half of the Central Africa population is expected to live in urban areas. They have seen the evolution of once-rutted jeep trails used to access remote villages now accessible by paved roads, typically related to the growth in logging, mining and hydroelectric industries. Road construction and similar disturbances in the jungle terrain alters ecosystems in which pathogens

and their hosts reside, they note. This increases the opportunity for new infectious diseases to emerge and reduces the time it takes people to travel to and from urban areas, allowing outbreaks to spread quickly.

"Clearly, Central Africa is rapidly approaching a tipping point," the authors state. "Africa's economic development is a positive change that cannot and should not be stopped. At the same time, rapid economic and demographic transitions bring the challenges of emerging [infectious disease outbreaks](#) of increased frequency, size, and global impact."

They believe that increases in population, income and educational attainment could spur demand for improved services, including health care. Moreover, directed investments in clinical research infrastructure could include training health care workers to identify, report and properly handle cases of unknown emerging infectious [disease](#); diagnose patients; provide clinical care; and test new vaccines and therapeutics.

"Directed and sustained investment is urgently needed, before ongoing demographic and economic changes conspire to cause major outbreaks of both national and international consequence," they write.

More information: Vincent J. Munster et al, Outbreaks in a Rapidly Changing Central Africa—Lessons from Ebola, *New England Journal of Medicine* (2018). [DOI: 10.1056/NEJMp1807691](https://doi.org/10.1056/NEJMp1807691)

Provided by NIH/National Institute of Allergy and Infectious Diseases

Citation: Rapid development in Central Africa increases the risk of infectious disease outbreaks (2018, August 23) retrieved 27 April 2024 from <https://medicalxpress.com/news/2018-08-rapid-central-africa-infectious-disease.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.