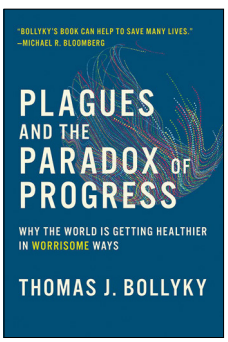
Books

Farewell to the god of plague



Plagues and the Paradox of Progress: Why the World Is Getting Healthier in Worrisome Ways
Thomas J Bollyky
MIT Press, 2018
pp 280, £17·39
ISBN 978-0262038454

The story of the decline of infectious diseases in the 19th century in developed countries is a fairly familiar one: cholera, tuberculosis, and smallpox were defeated through a combination of clean drinking water, improved sewage systems, vaccination, and a wider improvement in living conditions and social infrastructure. However, there has been a similar decline in infectious diseases in the past few decades in developing countries. In 1950, one in five babies died before age 5 years in nearly 100 countries. Nowadays, there are no countries where this is true. But according to Thomas Bollyky, in his book *Plagues and the paradox of progress*, there are fundamental differences between these two tales of disease eradication, and these differences will have important implications for the health and economy of low-income regions in the 21st century.

Bollyky argues that different factors were crucial in the eradication of disease in rich, developed countries in the 19th century than in modern, poorer countries. The larger part of the gain in infectious disease control in higher-income countries occurred before the development of effective medical treatments. Long-term declines in disease in these countries was accompanied by "increased industrialisation and a rising middle class, the advent of trade unions and better women's education, and the establishment of public health laws and more responsive government institutions" whereas the current decline in infectious diseases has not been accompanied by economic growth, job opportunities, or better governance. This discrepancy is because the current decline in disease has been largely due to aid programmes from developed countries, which are largely focused on providing vaccinations and medicines for particular diseases, such as the WHO attempt to eradicate malaria (which ultimately failed, but saved an estimated 1·1 billion lives in the process) and a successful programme to eradicate smallpox. These are known as vertical programmes, because they are imposed from above (ie, internationally) and target just one disease with a single intervention.

This decline in infectious diseases has not been accompanied by the same level of infrastructure development that high-income countries had, not least of which is health-care infrastructure. As infectious diseases decline, other conditions, such as heart disease and diabetes, become more urgent and health-care systems in low-income countries may struggle to cope. Annual health-care spending averages only US$23 per person in low-income nations, such as Ethiopia, and $133 per person in lower-middle-income nations, such as India or Vietnam, compared with $2695 in the UK and $3860 in the USA.

Another consequence of infectious diseases decline is increasing urbanization in developing regions. Before 1950, most large cities were in wealthy countries; by 2016, 57 of the poorest countries had over a third of the population living in cities. These cities are not just poor compared with contemporary London or New York, but also compared with those cities at the time when their countries first became urbanised. These cities are growing faster than their infrastructure can handle, are unable to develop their manufacturing sectors in the same way cities in developed regions did, and face greater exposure to the risks of climate change.

Bollyky also explores the demographic effects of a decline in infectious diseases, citing research that suggests that the prime driver of migration is a "surplus young adult population", usually due to a decline in infant mortality, and arguing that "the decline of infectious diseases has been told through the migration of its beneficiaries". The current wave of "surplus young adults" face home nations unable to provide them with adequate housing, health care, or employment and face increased hostility to immigration from developed nations. However, if they stay, these "surplus young adults" can be of enormous economic benefit to their home country: Bollyky argues that China's economic growth was partly due to the abundance of young adults of working age with comparatively few dependants that followed a disease eradication programme that ran from 1948 to 1979.

Bollyky argues that these factors pose fresh challenges to the countries concerned and the aid agencies that played a role in bringing about this decline. One case where these factors created a serious challenge came during the 2013 Ebola virus outbreak in west Africa. Previous outbreaks had remained confined to rural villages and burnt out quickly, but the combination of increased trade and travel in Africa, coupled with scarce health infrastructure meant that the disease was able to spread further, raising the serious concern that it might reach a poor, crowded city that would provide an "ideal incubator for outbreaks". Bollyky proposes several measures to avert these potential issues; he argues that aid agencies need to move away from "disease focused goals to more outcome oriented measures for improving health" and focus more on non-communicable diseases. He also argues that aid agencies should move towards a role more focused on data gathering to aid local advocates for change. Bollyky concludes that the decline of infectious diseases in low-income countries has raised the possibility of "deep challenges", but they can be overcome with proper planning and a realistic understanding of the potential problems we face.

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