Epidemic

An epidemic typically refers to a sudden increase in the number of cases of a disease above the normal expectation for a population in a particular time and area. Globally, epidemics of HIV/AIDS, various influenza viral strains, and viral hemorrhagic fevers such as Ebola garner the most attention from news media and responding organizations (e.g. the United States Centers for Disease Prevention and Control, the CDC, or the United Nations World Health Organization). Previously, the term “epidemic” only referred to a sudden increase of a contagious infectious disease in a population, but now it is used more broadly to include extraordinary increases in non-communicable diseases, such as type 2 diabetes and cancer in particular populations, and sudden increases in zoonotic diseases (meaning that they are caused by pathogens transmitted between humans and other animals, such as the West Nile virus), which are not contagious (CDC 2018).

In the more traditional definition of an epidemic as being caused by an infectious agent, epidemics occur when something changes about either the population of infectious agents or the population of susceptible hosts. For this kind of an epidemic to take place, susceptible host species (such as humans) must exist in adequate numbers, and circumstances must cause enough susceptible hosts to become infected with the disease agent of concern.

Epidemics are caused by a variety of phenomena: the introduction of an infectious agent into an environment where it has not been before and/or where extant hosts lack adequate immune response; changes in transmission dynamics or the ecology of the host or agent population; the emergence and proliferation of genetic variants or mutations of the hosts or infectious agents that change susceptibility or immunity; or when the transmission dynamics or the population of infectious agents shift such that new or more susceptible hosts are exposed to the pathogen. Most contemporary epidemics, including recent epidemics of the Ebola virus, HIV, MERS-CoV, different influenza virus strains, anthrax, and so on, are zoonotic. Often, zoonotic diseases emerge in areas already beset by poverty and inequity (Gebreyes et al. 2014). The One Health paradigm is a framework that is often invoked to study and respond to epidemics of zoonotic disease and focuses on viewing diseases as they emerge and spread within multispecies ecologies (CDC 2019).

The term epidemic is often contrasted with the word endemic, which means the baseline number of cases of a disease that are usually present in a given population. Endemicity is the observed normal level of disease in a given population. For example, malaria is endemic in much of sub-Saharan

Africa; by contrast, Ebola has caused several epidemics in Africa but it is not currently endemic to African communities or countries. An infectious disease can continue to spread indefinitely in the absence of prevention or treatment interventions, and assuming that the level of a particular disease is not high enough to deplete the pool of susceptible persons. The term pandemic refers to an epidemic that is spread over multiple regions of the world or continents. One example is the COVID-19 pandemic, caused by the SARS-CoV-2 virus.

Recent debates in the fields of global health, medicine, and epidemiology focus on the best ways to predict, track, prevent, and control epidemics of infectious disease. Some scientists are now pushing for better disease surveillance systems, especially in low-income countries, as the best way to prevent outbreaks of disease. However, governments and non-governmental organizations in the health sector often commit few resources to the local infrastructural and educational resources necessary for disease surveillance. Instead, they mostly invest in technically sophisticated, but not socially or politically responsive, mathematical modeling tools that are designed to predict future outbreaks (Andersen 2018), or only invest in responses once epidemics emerge and threaten other countries. Funding for research often focuses on the development and testing of new vaccines, treatments, diagnostics, and other forms of biotechnology that have the potential to generate private sector money, rather than on sustainable and local forms of labor, higher education, and basic laboratory equipment required of disease surveillance systems in impoverished communities (Andersen 2018; Kelly 2018).

As of today, social science literature on epidemics mostly entails studies of two infamous epidemics: HIV/AIDS and the Ebola virus. These studies point to how the sudden and narrow emergence of funding for epidemics (often of diseases feared by the general public in donor countries) can lead to inadequate funding to address broader and entrenched health inequities and gaps in basic primary health care that have long plagued the places where outbreaks occur (Benton 2015). Rather than being neutral or limited in scope, epidemic control initiatives shape local social relations and political formations (Kenworthy 2017). International responses to disease epidemics are also frequently examples of “vertical” or top-down and disease-specific global intervention programs that can ignore, thwart, or overshadow local efforts to stem the transmission of disease and care for affected persons (Abramowitz et al. 2015).

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Ethics

With the identity of humanitarian action as a moral endeavor, ethics is central to the study of humanitarianism (Slim 2015). The responsibility to provide humanitarian assistance and abide with international humanitarian law brings up questions of ethics and moral responsibility, as do normative criticisms of the nature and effects of humanitarian efforts.

Ethics is concerned with the evaluation of attitudes and behavior based on a combination of ideas of values and reality. A distinction can be made between *meta-ethics*, *normative ethics*, *applied ethics*, and *descriptive ethics*. *Meta-ethics* examines the theoretical foundations of ethics, such as the idea of deriving prescriptive implications from a notion of humanity in humanitarianism. *Normative ethics* evaluates ethical ideas, such as the adequacy of “humanity” as a principle of action. *Applied ethics* assesses attitudes and behavior in concrete practical contexts, such as the operationalization of a principle of humanity in refugee management. Ethics can also be studied in a *descriptive* sense by examining the ethical ideas that people have, without evaluating whether these are true or false, right or wrong.