

CORRESPONDENCE

Response to “Metaphorically or Not, Violence Is Not a Contagious Disease”

Gary Slutkin, MD, Charles Ransford, MPP, and Daria Zvetina

This correspondence responds to Michael B. Greene’s letter to the editor, “[Violence is Not a Contagious Disease](#),” which appears in the May 2018 issue, 20(5), of the AMA Journal of Ethics and was written in response to Slutkin et al., “[How the Health Sector Can Reduce Violence by Treating It as a Contagion](#)” in the January 2018 issue, 20(1), of the AMA Journal of Ethics.

Greene is correct in recognizing that violence has for several decades been seen as a preventable public health problem. However, violence also meets the definitions of both “disease” and “contagious.” In challenging this fact, Greene advances two common misunderstandings about the concept of *violence* as a disease and of *contagious*, which we address below.

First, a disease is defined as “any deviation or interruption of structure or function of a part, organ, or system of the body, as manifested by characteristic symptoms and signs (causing morbidity and mortality)” [1]. Indeed, as discussed in our article [2], violence affects the structure and function of the brain, has characteristic signs and symptoms, and causes morbidity and mortality. Violence also demonstrates the characteristics of an epidemic type of disease, specifically through its clustering, spread, and transmission [2]. The transmission of violence has been well documented for child abuse, community violence, intimate partner violence, and suicide [3, 4] as well as between syndromes, such as community violence exposure increasing the risk of perpetrating domestic violence [5].

People can hesitate to accept violence as an epidemic disease because of difficulty identifying the agent, pathogen, and vector. While pathogens are commonly understood as biological agents, diseases are often caused by nonbiological agents. For example, certain chemicals are understood to be agents for development of diseases, including several autoimmune diseases [6]. Similarly, for contagious disease an organism is not required, only that some exposure to an agent leads to more of the disease or that the disease spreads from one to another [1]. Furthermore, many infectious diseases do not have vectors but are instead transmitted directly (e.g., person to person, through physical contact) or indirectly (e.g., through a contaminated surface or object). Means of transmission for various diseases are not limited to touch and breath but also include ingestion and even social contact. No biological germ is required. Violence does not have a biological or a vector agent. What defines violence as contagious is that it can spread

from person to person with one event leading to another and that it is a risk factor for itself, meaning that exposure to violence is a risk factor for the formation of violent behavior.

As Greene states, the term “epidemic” by definition refers to a rate of prevalence that is higher than expected, which he presumably believes not to be the case for lethal violence when the current rate is compared to the rate in the 1990s, which was higher [7]. We offer a different baseline—rates of killing in other developed countries—which tend to be 1 to 2 killings per 100 000 [8]. By contrast, in 2016, the national rate of killing in the United States was 5.3 per 100 000 [9], and the rate in the city of Chicago was 28.1 per 100 000 [10].

Greene attributes violence to other social, economic, and environmental factors—such as poverty, poor schools, and segregation—based on the observation that violence concentrates in areas that also have a concentration of these other factors. It is important to note that many infectious diseases are also often concentrated in areas with these same characteristics, such as tuberculosis, malaria, and HIV/AIDS, yet no one today would suggest that they are the actual causes of those diseases. As with other infectious “diseases of poverty,” these and other factors are best understood as risk factors that increase a person’s susceptibility to disease—in this case, to violence.

While these risk factors are important and need to be seriously addressed, as with other contagious problems, interrupting transmission and changing behaviors can cause dramatic reductions in prevalence even in conditions of poverty, poor schools, and segregation and in the presence of other risk factors, as is evident in other epidemic control cases. Waiting decades to reverse conditions by focusing solely on these [environmental risk factors](#) is unacceptable and could inhibit the life-saving work that can be applied in these conditions.

There is still much to be worked out in understanding the pathogenesis of violence as a contagious health problem, as is the case for many other health problems, but enough is now known—about how violent behavior is formed, how it affects people including their brain and other systems, and how it spreads among individuals and within communities—to change how we understand and treat violence. Even for those not willing to accept violence as a contagious disease, its contagious nature and role as a health problem can still be recognized and utilized to achieve better outcomes. Violence is a contagious disease and by treating violence as a contagious disease, the health sector can work to cure it.

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Gary Slutkin, MD, is a physician, epidemiologist, infectious disease control specialist, and the founder and executive director of Cure Violence. He is also a professor of epidemiology and international health at University of Illinois at Chicago. He formerly served as medical director for the tuberculosis program for the San Francisco Health Department (1981-1985), where he learned infectious disease control methods and worked for the World Health Organization (1987 to 1994) reversing epidemics, including being principally responsible for supporting Uganda's AIDS program.

Charles Ransford, MPP, is the senior director of science and policy at Cure Violence, where he is responsible for all policy, research, and communications.

Daria Zvetina is the director of grants at Cure Violence, where she provides human services program design and implementation, government and foundation proposal development, research, writing, editing, and technical assistance.

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