

How AIDS Invented Global Health

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Related article, p. 2210

Over the past half-century, historians have used episodes of epidemic disease to investigate scientific, social, and cultural change. Underlying this approach is the recognition that disease, and

especially responses to epidemics, offers fundamental insights into scientific and medical practices, as well as social and cultural values. As historian Charles Rosenberg wrote, “disease necessarily reflects and lays bare every aspect of the culture in which it occurs.”¹

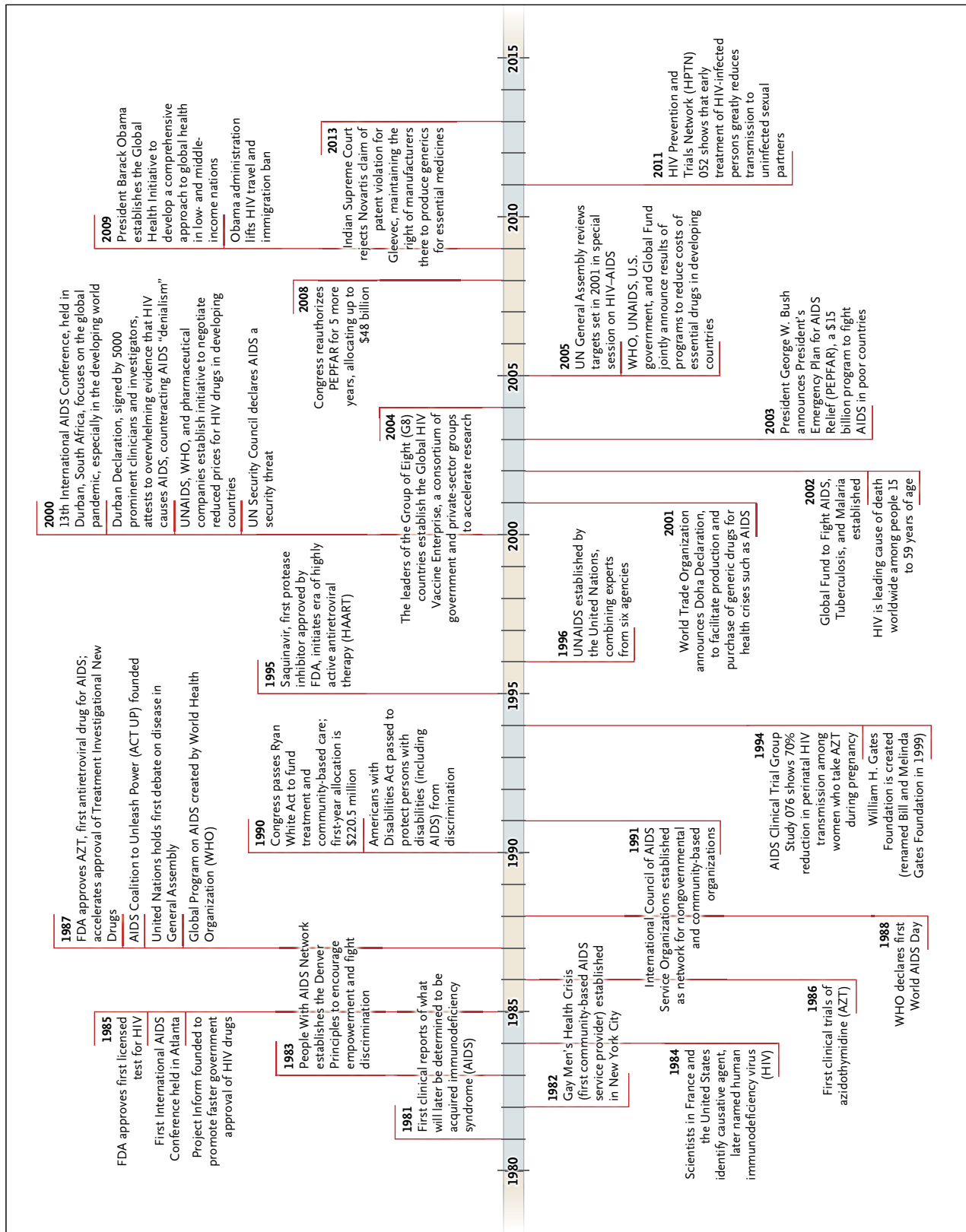
Many historians would consider it premature to write the history of the HIV epidemic. After all, more than 34 million people are currently infected with HIV. Even today, with long-standing public health campaigns and highly active antiretroviral therapy (HAART), HIV remains a major contributor to the burden of disease in many countries. As Piot and Quinn indicate in this issue of the *Journal* (pages 2210–

2218), combating the epidemic remains a test of our expanding knowledge and vigilance.

Nonetheless, the progress made in addressing this pandemic and its effects on science, medicine, and public health have been far-reaching (see timeline). The changes wrought by HIV have not only affected the course of the epidemic: they have had powerful effects on research and science, clinical practices, and broader policy. AIDS has reshaped conventional wisdoms in public health, research practice, cultural attitudes, and social behaviors. Most notably, the AIDS epidemic has provided the foundation for a revolution that upended traditional approaches to “international

health,” replacing them with innovative global approaches to disease. Indeed, the HIV epidemic and the responses it generated have been crucial forces in “inventing” the new “global health.”

This epidemic disrupted the traditional boundaries between public health and clinical medicine, especially the divide between disease prevention and treatment. In the 1980s, before the advent of antiretroviral therapies, public health officials focused on controlling social and behavioral risk factors; prevention was seen as the only hope. But new treatments have eroded this distinction and the historical divide between public health and clinical care.² Clinical trials have shown that early treatment benefits infected patients not only by dramatically extending life expectancy, but by significantly reducing the risk of transmission to their uninfected sexu-



al partners.³ Essential medicines benefit both patients and populations, providing a critical tool for reducing fundamental health disparities. This insight has encouraged the integration of approaches to prevention and treatment, in addition to behavioral change and adherence.

The rapid development of effective antiretroviral treatments, in turn, could not have occurred without new forms of disease advocacy and activism. Previous disease activism, for example, had established important campaigns supporting tuberculosis control, cancer research, and the rights of patients with mental illness. But AIDS activists explicitly crossed a vast chasm of expertise. They went to Food and Drug Administration meetings and events steeped in the often-arcaic science of HIV, prepared to offer concrete proposals to speed research, reformulate trials, and accelerate regulatory processes. This approach went well beyond the traditional bioethical formulations of autonomy and consent. As many clinicians and scientists acknowledged, AIDS activists, including many people with AIDS, served as collaborators and colleagues rather than constituents and subjects, changing the trajectory of research and treatment.⁴ These new models of disease activism, enshrined in the Denver Principles (1983), which demanded involvement “at every level of decision-making,” have spurred new strategies among many activists focused on other diseases. By the early 2000s, AIDS activists had forged important transnational alliances and activities, establishing a critical aspect of the “new” global health.

Furthermore, HIV triggered

important new commitments in the funding of health care, particularly in developing countries. With the advent of HAART and widening recognition of HIV’s potential effect on the fragile progress of development in resource-poor settings, HIV spurred substantial increases in funding from sources such as the World Bank. The growing concern in the United Nations and elsewhere that the epidemic posed an important risk to global “security” elicited new funding from donor countries, ultimately resulting in the establishment of the Global Fund to Fight AIDS, Tuberculosis, and Malaria. In 2003, it was joined by the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), which, with bipartisan support, initially pledged \$15 billion over 5 years. Since PEPFAR’s inception, Congress has allocated more than \$46 billion for treatment, infrastructure, and partnerships that have contributed to a 25% reduction in new infections in sub-Saharan Africa.

HIV has also attracted remarkable levels of private philanthropy, most notably from the Bill and Melinda Gates Foundation. HIV funding led to new public–private partnerships that have become a model for funding of scientific investigation, global health initiatives, and building of crucial health care delivery infrastructure in developing countries. These funding programs have fomented contentious debates about priorities, efficiency, allocation processes, and broader strategies for preventing and treating many diseases, especially in poorer countries. Nonetheless, they offered new approaches to identifying critical

resources and evaluating their effect on the burden of disease. The success of future efforts will depend on maintaining and expanding essential funding during a period of global economic recession, as well as new strategies for evaluating the efficacy of varied interventions.

AIDS also spurred another related debate that continues to roil global health — about the cost of essential medicines. Accessibility of effective and preventive treatments has relied on the availability of reduced-cost drugs and their generic equivalents. A recent decision by the Indian Supreme Court upheld India’s right to produce inexpensive generics, despite the multinational pharmaceutical industry’s claims for stronger recognition of patents.

Another central aspect of the new activism was an insistence that the AIDS epidemic demanded the recognition of basic human rights. Early on, lawyers, bioethicists, and policymakers debated the conditions under which traditional civil liberties could be abrogated to protect the public from the threat of infection. Such formulations reflected traditional approaches to public health and the “police powers” of the state, including mandatory testing, isolation, detention, and quarantine. Given the stigma attached to HIV infection at the time, as well as ungrounded fears of casual transmission, affected people often suffered the double jeopardy of disease and discrimination. As a result, Jonathan Mann, the first director of the World Health Organization’s Global Program on AIDS, explained, “To the extent that we exclude AIDS infected persons

from society, we endanger society, while to the extent that we maintain AIDS infected persons within society, we protect society. This is the message of realism and of tolerance.”⁵ Mann argued that HIV could never be successfully addressed if impositions on human rights led people to hide their infections rather than seek testing and treatment. Only policy approaches that recognized and protected human rights (including the rights to treatment and care, gender equality, and education) would permit successful clinical and population-based interventions.

These complementary innovations are at the core of what we now call “global health” — which has demonstrated its capacity to be far more integrative than traditional notions of international health. It draws together scientists, clinicians, public health officials, researchers, and patients, while relying on new sources of funding, expertise, and advocacy. This new formulation is distinct, first of all, in that it recognizes the essential

supranational character of problems of disease and their amelioration and the fact that no individual country can adequately address diseases in the face of the movement of people, trade, microbes, and risks. Second, it focuses on deeper knowledge of the burden of disease to identify key health disparities and develop strategies for their reduction. Third, it recognizes that people affected by disease have a crucial role in the discovery and advocacy of new modes of treatment and prevention and their equitable access. Finally, it is based on ethical and moral values that recognize that equity and rights are central to the larger goals of preventing and treating diseases worldwide.

For more than the past decade, major academic medical centers, schools of public health, and universities have created global health programs and related institutes for multidisciplinary research and education. Thus, the institutionalization of this formulation is not only affecting services worldwide, but also

changing the training of physicians, other health professionals, and students of public health. When the history of the HIV epidemic is eventually written, it will be important to recognize that without this epidemic there would be no global health movement as we know it today.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

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War and Sexual Violence — Mental Health Care for Survivors

Charlotte Watts, Ph.D., Mazedra Hossain, M.Sc., and Cathy Zimmerman, Ph.D.

Related article, p. 2182

There has been growing international concern about rape in fragile or volatile countries, especially those involved in armed conflicts; indeed, this concern has inspired the United Nations Security Council to issue nine sexual-violence-related resolutions since 2000.¹ Sexual violence is a human-rights abuse that often results in severe health consequences, including acute and

longer-term psychological problems, such as depression, anxiety, and post-traumatic stress disorder (PTSD). In addition to the short- and long-term effects on survivors and their families, the aftermath of widespread sexual violence can affect the community at large. A pressing challenge is therefore to determine how to help survivors and communities overcome the psycho-

logical effects of large-scale exposure to sexual violence and the other traumatic events that commonly occur in war-torn states.

Postconflict reconstruction efforts have traditionally focused on security, health, physical infrastructure, and economic development; they have been less well-equipped to respond to or prevent sexual and other forms of violence against women. Although