Commentary

Failed drug policies in the United States and the future of AIDS: A perfect storm

Ernest Drucker

Department of Epidemiology, Mailman School of Public Health, Columbia University, 722 West 168th Street, New York, NY 10032, USA.

Abstract How much could US policies have reduced the initial growth of the epidemic had we moved earlier to institute Harm Reduction drug policies such as needle exchange programs for injecting drug users? The US Centers for Disease Control estimates 50 000 HIV infections annually in the United States (156 per million population), but the more populous European Union estimates 5000 (less that 10 per cent of the US incidence) – a measure of the failure of US prevention policies for HIV. The earliest official responses to AIDS in the United States expressed official fear and condemnation of victims and denial of the magnitude and seriousness of the population risks in the epidemic's early stages. These failures with AIDS prefigure current US crises in general health policies and interfere with efforts to successfully inform public understanding of the meaning and value of scientific evidence about health have diminished public confidence in credibility and trustworthiness of professional and political leadership for US health polices.
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AIDS in North America is now considered a wholly preventable and 'treatable' disease. Yet we have no great cause for celebration. Today, the incidence of new HIV infections in the United States continues unabated, estimated by the US Center for Disease Control at over 50 000 new infections annually,[1] a rate of 156 per million population, about half a million new AIDS cases in the last decade alone. By contrast, the European Union, with over 400 million population, now estimates its annual HIV incidence to be 12.7 per million – or about 5000 new cases per year – less that 10 per cent of the US incidence.[2] How may we understand this tragic failure to contain the HIV epidemic in the US?

In the 1980s, many of us thought that the emerging evidence about this new disease and its imminent dangers would alone provoke an adequate response. We were wrong. Instead, we saw the triumph of fear and denial – fear of the victims and denial of the magnitude and seriousness of the great risks it posed to so many more Americans. Don Francis[3] explains that President Reagan presided over 5 years of a burgeoning epidemic before he first uttered the word 'AIDS' in public – when he lost his friend movie star Rock Hudson to the disease in 1985 – one among the 4000 who had already died. These early crucial years featured official hostility to gays and drug users and profound ignorance of Reagan and his senior advisors about the gravity of the epidemic.

Now in the fourth decade of the AIDS epidemic in the United States, we face an entrenched epidemic of over one million Americans – as HIV infection continues to spread through the population. In addition, some of the questions about how it all began suddenly seem to have significance well beyond the historical perspective.

- What do we know about how US health policies and politics affected the early course and trajectory of the American epidemic?
- Which policies helped stem the tide of new infections in the epidemic's first years, what opportunities were missed – and at what cost?

In this commentary, I ask what difference the United States could have made had we moved earlier and more effectively to focus on the key populations and issues driving the first outbreaks of HIV in American cities – IV drug use and the risks for the gay population. Why, in those early and most crucial years, did we have so little understanding that these stigmatized populations were central to the future of the epidemic and that they were nested in larger ones, where their many intimate connections would extend HIV into the larger population of Americans – especially its poor and minorities?[4]

Here I want to focus on the consequences of our failures to forthrightly address injecting drug use and how this failure fueled the early and rapid growth of the HIV epidemic. The geography of urban poverty in the United States and its association with injection drug use (IDU) resulted in HIV becoming concentrated in the poorest communities of the country, where 'zero tolerance' drug laws and their enforcement also led to mass incarceration for this same population throughout the

critical early years of AIDS.[5] It drove the most dangerous practices further underground (for example, 'shooting galleries' where many users reused contaminated syringes, plus stimulant use in both gay and straight club culture). For these groups it limited access to HIV testing and health care.

A Counterfactual Experiment

At that time (when becoming HIV positive meant certain death) we had no effective treatment for the viral infection itself – so prevention was our only hope. The 'tough on drugs and crime' posture that dominated US drug policies (still in force today) led to significant delays of implementation of effective Harm Reduction (HR) drug policies and programs in the United States – especially needle and syringe exchange programs (NEPs), methadone treatment for heroin injectors, and the range of outreach services that typically accompanied them. Yet campaigns to establish NEPs met intransigent political opposition. HR programs in general and NEPs in particular were criticized as sending the 'wrong message' and 'tolerating' drug use – counter to the climate of 'zero tolerance'.[6]

NEPs and the concept of HR soon became lightning rods for political opposition that had nothing to do with public health – except to worsen it. Under President Reagan and both Presidents Bush, the very words 'harm reduction' were proscribed in all government programs and literature; and their use in any Federal grant applications was grounds for rejection. The US Congress (with the Helms Amendment to the AIDS appropriations bills) banned use of federal funds for all such programs, a restriction that severely limited our ability to blunt the AIDS epidemic among drug users, their partners, and their children. To capture this policy's public health implications in the mid-1990s, Peter Lurie and I attempted to document the scale and costs of this policy failure. Specifically, we quantified the consequences of the US refusal to make NEP's available in this country as they already were in Australia, Switzerland,[7] and several others. Our counterfactual research question was 'what are the costs in lives and treasure of US policies that restrict IDU's access to sterile injections?'

By the mid-1990s, there was already ample evidence of the safety and efficacy of NEPs in preventing new AIDS infections. Six government-funded reports supported needle exchanges.[8–11] More comprehensive

HR programs built around NEPs carried the *right* public health messages for active drug users: it is dangerous to share injecting equipment. Networks of NEPs were by then well underway in many other countries: the United Kingdom had more than 150 NEPs by 1990; Australia had enough to meet the needs of all its injectors, and 75–85 per cent of drug users took advantage of them. In the United States, at that time only 10–15 per cent of the population in need had NEP coverage.

These state and locally funded programs offered more than clean injecting equipment. They offered better access to HIV testing and treatment, addiction care, and most significantly, to general medical treatment for the many other health problems plaguing this marginal population. While all Britons were eligible for care by a General Practitioner with no fee, only 25 per cent of initial NEP users had ever registered with one.[12] Government sponsored NEPs thus provided a bridge to involving greater numbers of active drug users in mainstream health care, also offering them the best hope of early detection of HIV. In the United States, drug users were generally unwelcome in most health and mental health settings, and so missed these opportunities for testing to detect their HIV infections early. In addition, AIDS did little to improve most health care providers' attitudes, even as the scale and severity of this new caseload grew exponentially in places such as the Bronx (the poorest district of New York City with the greatest concentration of racial and ethnic minorities and crumbling environment).

In our study, Lurie and I estimated the number of HIV infections that could have been prevented if NEPs had been widely implemented during the early stages of the AIDS epidemic in the United States.[13] We also estimated the cost to the US health-care system for treating these preventable HIV infections, adding the economic impact to acknowledge the fiscal implications of these policy failures. Calculating the annual number of preventable HIV infections accounted for by the best studies available at that time allowed us to factor in the effectiveness, safety, and level of use of NEPs, as well as the role of secondary transmission to sexual partners and children among populations of injection drug users.

We obtained data for the model from the best epidemiological and mathematical studies in peer-reviewed published research, government reports, and consultations with experts. Using as our guide data on these parameters from Australia – which had instituted significant NEP

programs early in its own HIV epidemic – we calculated the number of HIV infections that could have been prevented had a national NEP been in place in the United States between 1987 and 1995. We based cost calculations on the US government estimate of the lifetime cost of treating an HIV infection (then US$55 640). Our conservative calculation of the number of HIV infections that could have been prevented ranged from 4394 (15 per cent incidence reduction because of needle exchanges) to 9666 (33 per cent incidence reduction). The cost to the US health-care system of treating these preventable HIV infections would then have been between $ 244 million and 538 million. If the US policies were not changed, we estimated occurrence of an additional 5150 to 11 329 preventable HIV infections by the year 2000.

Fifteen years later, we know that this high number never materialized because of growing awareness of the importance of clean injection among IDUs, plus increases in access to 'underground' NEPs that circumvented laws prohibiting them, and authorities used those laws to prosecute participants in dozens of cases. In addition, limited pharmacy distribution and expansion of local and state supported NEPs helped. These HR steps and the growth of educational and treatment services spread awareness through NEPs and other HR programs and led to a steady decline in the prevalence of HIV infections among US drug users in the succeeding decades,[14] amounting to a confirmation of the significance of earlier opportunities missed. We therefore concluded that 'the failure of the federal government in the USA to implement a national needle-exchange program … may have led to HIV infection among thousands of IDUs, their sexual partners, and their children'.

While President Obama revoked the US government ban on funding for NEPs in 2010, the absence of dedicated funds (in the midst of the financial crisis) failed to expand such programs. Then (amazingly) in the 2011 Omnibus Budget (bearing President Obama's signature), the United States re-instituted the ban on use of Federal funds for NEPs. Mystery surrounds the reinstatement of the ban – we have not determined who is responsible, but apparently our earlier history of hostility to HR approaches endures. One recalls the words of Reagan's closest health advisor and later Surgeon General, Dr James Mason when AIDS first appeared 'there are certain areas which, when the goals of science collide with *moral and ethical judgment*, science has to take a time out'. Once again politics trumped public health.

Implications for Health Care and Public Health in the United States

The early days of AIDS in America helped to lay the groundwork for many profound failures in our nation's health care and health policies – failures that would directly impact the trajectory of the AIDS epidemic in the United States. These failures include more restrictions on access of the poor to health services, the closure of many hospitals with inpatient drug detoxification facilities, and the 'end of welfare' – cutting vital supports for housing and food. Instead, we have a perverse political opposition to building any government system that assures universal access to heath care in the United States – derided as 'socialized medicine' in a country where 40 million (mostly the working poor) have no insurance or any right to health care. Who would ever have imagined that the first successful steps in 40 years toward universal health care in America under President Obama would become a ferocious battle-ground for political power?

As in war, truth is the most significant casualty of these health policy failures, ones we first saw early in the AIDS epidemic around the public's comprehension of the meaning of the collective nature of risk and public health. We now see a decline in laypeople's confidence in the competence and trustworthiness of scientific evidence and the health professions whose raison d'etre rests on science – with recent declines in what we thought were well-established foundations of public health: immunization, circumcision, fluoridation, among others. These failures to inform public understanding of scientific evidence highlight the importance of credible trustworthy leadership in all health polices.

The Future of Drug Use and AIDS

The significance of drug injection for HIV in developed countries has diminished in the last decade, as HR concepts, policies, and programs have gained wide acceptance among public health practitioners and drug users themselves.[15] However, the United States and Europe are still part of a larger world in which drug use remains central to the course of the global HIV epidemic. In an important *Lancet* paper in 2010,[16] Strathdee *et al*, assessed the status of IDU in the global HIV pandemic, concluding that drugs pose an 'increasingly important cause of HIV transmission worldwide' – especially in less developed countries. The scale and

significance of drug injection can now be ascertained for 61 countries, containing 77 per cent of the world's total adult population. Extrapolated estimates suggest that 10–20 million people now inject drugs worldwide, with the largest numbers of injectors in China, the United States, and Russia. If we continue to fail to adequately address this issue at home, we will have little hope of addressing it globally – and we cannot afford any more lost opportunities to counter this epidemic.

About the Author

Ernest Drucker, PhD, is a Professor Emeritus in the Department of Family and Social Medicine, Montefiore Medical Center/Albert Einstein College of Medicine, Adjunct Professor of Epidemiology at Columbia University's Mailman School of Public Health, and a Senior Research Associate and Scholar in Residence at John Jay College of Criminal Justice CUNY.

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