Socioeconomic Influences on the Transmission of Human Immunodeficiency Virus Infection

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Worldwide, and in pockets of poverty in the United States, there is growing evidence that poverty is a major contributor to the spread of human immunodeficiency virus infection. Specific socioeconomic forces contributing to the spread of the infection include the status of women, prostitution, drug use in poor populations, the role of prisons, economic factors that disrupt families, and cultural attitudes. A lack of awareness of or an unwillingness to address the social, cultural, and economic forces contributing to the transmission of the human immunodeficiency virus have hampered attempts to stem the epidemic. A “social prevention” strategy is called for in which socioeconomic influences on human immunodeficiency virus transmission can be ameliorated. Practicing physicians should be aware of these forces because they profoundly influence the effectiveness of patient education, prevention, and treatment.

The influence of social, cultural, and economic forces on the transmission of the human immunodeficiency virus (HIV) deserves critical attention. Worldwide, these forces have probably always been a major influence on the spread of this epidemic. In the United States, socioeconomic influences are becoming increasingly more evident as the epidemic shifts from a predominantly gay disease to one affecting heterosexual persons. What is now known to be HIV infection was first reported as opportunistic infections presenting in gay men in New York, NY, and San Francisco, Calif. Shortly thereafter, the acquired immunodeficiency syndrome (AIDS) was also reported among a group of Haitian patients in Miami, Fla. In retrospect, these patients represented the first reported cases of heterosexual HIV transmission and the first hint of the influence of socioeconomic forces on what was probably already a worldwide viral epidemic. These reports generated a storm of controversy. Haitians rightly believed that being labeled a risk group would only increase discrimination against them.

Because the cause of AIDS was not known at this time, epidemiologists used the concept of risk factors. Through this process, statistical associations were established for male homosexuality, the receipt of a blood transfusion, injection drug use, and minority status. No multivariate analysis looking at economic factors as a potential confounder has ever been performed, however, and the Centers for Disease Control and Prevention “HIV/AIDS Confidential Case Report” form does not query about socioeconomic status. This continues despite a growing body of evidence that in developing countries and among areas of poverty in the United States, socioeconomic status clearly correlates with risk and influences survival, both generally and specifically with regard to HIV infection. Most great epidemics have disproportionately affected the poor. The AIDS epidemic will not likely be an exception.

The issue of socioeconomic forces is particularly relevant to the problem of identifying minority status as a risk factor. Although most thoughtful people have shifted their thinking away from risk factors and toward risk behaviors, some among the general public may assume that the association between HIV infection and minority status is related to race per se or that minorities are more prone to drug use, promiscuity, or homosexuality. The concept of risk factors continues to profoundly influence both public and professional thinking about HIV infection, despite the discovery...
of a viral cause and the documentation of heterosexual transmission, particularly among the poor in developing countries and in pockets of poverty in the United States. There are other consequences of the public perception of risk factors. Regarding the problem as outside the mainstream allows for “blaming the victim”—affected persons must somehow suffer their fate because they are gay, a member of a minority, a drug user, poor, or from another country. The concept of risk factors also affords distance, an illusion of safety for those who do not consider themselves within the risk groups. From the perspective of the scientific community, as stated by Basset, understanding of HIV transmission between individuals offers little insight into the emerging uneven worldwide distribution of infection. The brunt of the epidemic is borne by the poor, marginalized, and powerless. To understand this unequal pattern of vulnerability, we must look to the social and economic forces which perpetuate the AIDS epidemic.

In this article, therefore, we will not consider social, cultural, and economic influences as risk factors in the traditional sense but rather as forces that have promoted the spread of this epidemic.

Related to the above is the question of why socioeconomic issues have not received more attention in relation to HIV transmission. Data about socioeconomic status may be more difficult to verify. Certainly, it is more difficult to assess the significance of socioeconomic information. Social remedies are harder to formulate (and fund) than medical remedies. In this article, we present a few examples of how socioeconomic forces have contributed to the spread of HIV infection in the United States and worldwide and explore the implications of these forces on prevention, treatment, and policy.

**INFLUENCE OF SOCIOECONOMIC FORCES ON HIV TRANSMISSION**

**Women’s Status**

Around the world, women’s cultural and economic status is inversely correlated with their risk of acquiring HIV infection. Where women lack self-sufficiency, where they are denied choices about their economic livelihood and their sexuality, and where they are confined to a narrow social sphere, HIV transmission will be facilitated. Women are disproportionately poorer than men and are often politically disfranchised as well. The early onset of sexual activity, teen pregnancy, and sexual relations with older men are all highly correlated with poverty. Cultural attitudes that promote numerous sex partners for men and lack of candid discussion about sex facilitate HIV transmission to women. The media have recently reported several poignant examples of the above from locations around the world, including Zimbabwe, the Philippines, Brazil, Vietnam, and sub-Saharan Africa. Although it could be argued that the existence of countries that are poor but that have a low HIV incidence, such as those in eastern Europe, belies that women’s status is a force on HIV transmission, we would argue that the epidemic is dynamic and that these countries have not yet reached a sufficient number of cases to make the impact of poverty on HIV infection among women apparent.

**Prostitution**

Poor men and women in the United States and in developing nations use prostitution as an economic survival strategy. In the United States, this work is highly correlated with drug use in inner cities and has contributed to the spread of HIV among the homeless. In developing nations, it is often associated with tourism. Sexual tourism in Bangkok, Thailand, is but one example of the degree to which HIV transmission can be increased by prostitution. It has been reported that in Cite Soliel (a shanty town in Port-au-Prince), Haiti, generally conceded to be the poorest community in the western hemisphere, 10% to 15% of adult residents have had sex with a person from another country. The more desperate the situation is, especially where limited viable employment opportunities exist, the more pressure there is on a person to perform sexual work.

**Drug Use**

The use of injected drugs and crack cocaine increases in poverty-stricken areas. The peddling of drugs often becomes a quick and glamorous venue for cash for pushers, while addicts become further impoverished. In crumbling communities, the forces of religion, family, and education that mitigate against drug use are hard pressed to compete with organized (and disorganized) narcotic trafficking.

In Miami, the price of crack cocaine is elastic and affordable in the poorest communities: the unit dose, a “nickel bag,” costs $5 or is bartered directly for sex. The intersecting epidemics of crack cocaine use and HIV infection among the poor in the inner cities of the United States is one of the most well-documented examples of the relationship between socioeconomic factors and the spread of HIV. The study by Edlin et al demonstrated that crack use promotes frequent, proprietary, and unsafe sex. Of the crack users in this study, 19% were homeless—evidence cited by the authors of the disfranchisement caused by drug use.

**Prison and Inner-City Poor Populations Overlap**

Poverty is associated with an increased incidence of crime, and poor men, especially poor African American men, have a high rate of imprisonment. Certainly, HIV transmission can occur inside prison, where sexual assault and drug use are common, or outside of prison, as prisoners are released with little rehabilitation to the same environment they were in before they were incarcerated.

**Economic Factors Promote Multiple Sex Partners and/or Disruption of Families**

Political unrest, famine, and economic hardship are obvious examples of socioeconomic forces that disrupt family bonds and facilitate the spread of HIV. For example, many men throughout Latin America emigrate to the United States, with or without work permits, accepting low-paying jobs as migrant laborers or farmworkers to support their families in their native countries. Prostitution is common in migrant labor camps. Similar economic difficulties threaten the stability of working poor families in the inner cities of the United States.
It is a cruel irony that drugs and prostitution are cheaper and more readily available to the homeless and the working poor of inner cities in the United States than are shelter and medical treatment. In Miami, the price of a “basic service” from a street prostitute is $5, tightly linked to the price of a unit dose of crack cocaine. Both of these commodities are affordable to people working in the labor pool, wind-shield washers, and aluminum collectors. In contrast, apartments are impossible to find for less than $300 per month.

**Cultural Attitudes**

It is difficult to write about cultural influences on the HIV epidemic because there are little objective data and strongly held opinions in the scientific community and among the general public. Although numerous examples may exist that demonstrate how culture affects the spread of HIV, we will focus our discussion on the possible influence of cultural attitudes toward homosexuality. Homosexuality is poorly understood, although mounting evidence suggests that it may be biologically predetermined. Although it could be argued that the HIV epidemic emerged in the context of the sexual and gay liberation movements of the 1960s and 1970s, we must also remember that gay liberation was a reaction to a commonly held attitude that homosexuality was a perversion or a crime. Thus, it is possible that repression contributed to the casual and multiple sexual relationships among gays during a period when they needed to hide their sexual identity. The current controversy over the legal recognition of gay marriages demonstrates the continuing discomfort of society at large toward promoting “family values” among gays. Finally, cultural proscriptions on frank discussions about sexuality in schools, in the media, or at home further impair educational efforts and perpetuate misconceptions and myths about HIV infection.

**Problems in Health Care Delivery**

Poor people have difficulty accessing care because either they cannot afford it or their country cannot provide it. Among the poor, the priority of health care may decrease when weighed against other more immediate necessities, such as food and shelter. These factors have surely facilitated the spread of HIV infection by allowing ulcerative or inflammatory sexually transmitted diseases to go untreated. Poverty is frequently associated with high illiteracy rates, making education about prevention extremely difficult. Furthermore, physicians are ineffective patient educators if they do not understand the influence of socioeconomic forces.

**IMPLICATIONS FOR CARE AND TREATMENT**

Because the economies of developing countries and the United States are so different, the implications of socioeconomic forces on the prevention and treatment of HIV infection in these 2 settings will be discussed separately. With the lack of political power of poor people in many developing countries and the lack of resources available to combat HIV infection through the international health community, international programs have difficulty dealing with all the issues raised in this article. These sad facts negate recent scientific progress against the disease.

The standard of care for patients with money or insurance has become technologically advanced and expensive, with the anticipation of dramatic improvements in outcome. Developing nations would be hard pressed to approach the standard of care applied in the United States and other developed countries. Hard decisions will need to be made, based on the availability of resources and expected outcomes. To say that antiviral therapy may be a luxury that developing countries can ill afford only begins to scratch the surface of this vexing problem. Because the epidemic affects predominantly heterosexual populations in developing countries, the number of orphans it produces will grow further taxing resources and burdening economically strapped governments. Without a consensus on how to proceed, there is little direction to the international effort against HIV infection and little evidence worldwide that the epidemic is beginning to ebb.

Promoting safer sex and condom use has limited utility as a worldwide strategy. There is some expense involved in condom use; condoms are not always available when needed, and their use is not always understood or accepted by every culture. From a worldwide perspective, if condoms were used by every couple at risk, the supply of latex would soon be exhausted. What are the chances that a person will practice safer sex if that person is trapped in an environment without hope for the future?

In the United States, problems in stemming the epidemic are as much political as economic. Support for HIV prevention and treatment is threatened by Congress. Will the commitment of the gay community to the fight against AIDS evolve into a commitment to the poor? How long will it take for welfare “reform,” health care “reform,” and immigration “reform” to increase the number of poor, uninsured persons; decrease access to prevention and treatment; and set the stage for a second wave of the epidemic? In the United States, a double standard for HIV care between insured and uninsured persons already exists and will certainly worsen as the number of poor, infected persons increases; the number of symptomatic patients also increases; funding for care through Medicaid and the Ryan White Act remains level or (most likely) decreases; and the cost of effective treatment increases through the widespread application of combination antiretroviral therapy.

A fresh approach to HIV prevention and treatment, recognizing the influence of socioeconomic factors on the spread of the disease, should be taken by national and international policymakers. A “social prevention” strategy would include strategies that cost little, such as linguistically and culturally competent public education and legal and policy changes that elevate the status of women; the decriminalization of homosexuality; the end of discrimination against gays, specifically in terms of inheritance and insurance; and the promotion of monogamous or oligamous homosexual and heterosexual relationships. Immigration policies should be reviewed so that immigrant families can stay together as functioning social and economic units.

Other strategies that may at first seem radical or expensive should receive serious consideration because the alternative of continuing to ignore the socioeconomic influences on the spread of HIV infection will be much
more expensive in the long run. Such strategies might include making drug rehabilitation programs and antiretroviral therapy available to all who wish them and mental health treatment programs that would provide a protected environment for homeles, mentally ill persons. There is great need for outcomes research and careful study of model cost-effective programs to demonstrate the efficacy of such strategies, recognizing that perfection in prevention is seldom achieved. Without rigorous evaluation, a social intervention program will fail. For example, unregulated economic development may actually disrupt families and increase poverty in the short term.

Finally, practicing physicians need to be aware of how these socio-economic forces are changing the AIDS epidemic. Education, prevention, and treatment programs will need to be geared to groups broader than gays and drug users. These programs will need to be culturally competent and affordable, even to the poor. To be accessible and cost-effective, care for persons with HIV infection will need to be less the domain of specialty physicians and provided more by primary care physicians. Therefore, primary care physicians will need to possess the knowledge, skills, and aptitudes required to be effective providers for these patients. Modern combination therapies should be available to all patients for whom they are clinically indicated. This will require patient advocacy, political activism, and community leadership on the part of practicing physicians.

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