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A Framework for Preventing AIDS

A compassionate, comprehensive, and effective approach to controlling AIDS (acquired immune deficiency syndrome) and preventing further transmission of human immunodeficiency virus (HIV) requires attention to four elements in a theoretical model:[1,2]

1) persons infected with HIV (hosts) or at risk of exposure (susceptibles),

2) persons responsible for providing medical care and protecting the public health (health care providers),

3) the physical, social, and cultural environments that facilitate or impede human interactions, and

4) social exchanges between persons and groups within these multidimensional environments.

When reports of highly unusual illnesses among homosexual and bisexual men began to circulate in late 1980 and early 1981, epidemiologic research focused on the attributes of hosts and their carefully matched controls. Now that the retrovirus that causes AIDS has been identified, multidisciplinary research is beginning to look at other elements in the theoretical model.

Two articles in this issue of the Journal explore the attitudes, beliefs, and practices of physicians who might encounter patients infected with HIV or at potential risk for exposure to HIV. Lewis, Freeman, and Corey[3] surveyed 1,000 practitioners in California, compared results from 1984 in Los Angeles County with those obtained in 1986, and found improvements in knowledge, but many physicians throughout the state failed to recognize the symptoms of HIV infection, failed to ask about the sexual orientations of their patients, and felt uncomfortable about counseling homosexuals. Kelly, *et al*,[4] surveyed physicians in three cities outside California, presented them with one of four vignettes about men with identical characteristics except for sexual orientation (homosexual or heterosexual) and clinical diagnosis (AIDS or leukemia), and found harsher attitudes directed toward the man with AIDS but not toward his homosexual orientation. These complementary reports remind us that our attack on the deadly virus must be broadly based; research must be directed to the effective education of health care providers as well as members of high-risk groups and others; and some resources must be efficiently allocated to social and behavioral scientists who can help guide potentially harmful activities into more constructive directions.

Both studies suggest that some health care providers and many of the general public still need to be convinced that AIDS is caused by a virus that is *not* casually transmitted. HIV is transmitted directly from an infected person to an uninfected person during very specific kinds of activities, such as: unprotected sexual exposures, sharing of contaminated needles, receipt of transfusions of blood or infusions of blood products, and perinatally from an infected mother to her child during pregnancy, at birth, or, perhaps, while breastfeeding. There appears to have been no role for mosquitoes, toilet seats, or common drinking cups in the transmission of the virus that caused this fatal disease for the first 30,000 cases reported in the United States.

The Surgeon General's Report on AIDS[5] clearly defines the risks of transmission and recommends precise steps to reduce and eliminate chances of infection. Additional research is needed, however, to establish baseline behavioral measurements, to track changes in relevant behaviors (particularly in high-risk groups), and to evaluate the effectiveness of educational messages from a variety of sources (e.g., Ann Landers as well as Dr. Koop) to a variety of target audiences. The World Health Organization[6] and the Institute of Medicine[7] have recognized the importance of social

and behavioral research in their comprehensive reports on AIDS, but neither identifies possible sources of financial support for this critical line of inquiry. The lion's share of money has traditionally gone to biomedical research; social scientists are left to fight over the scraps. (We note with gratitude the grant from the University-wide Task Force on AIDS to the Departments of Medicine and Sociology at UCLA for the study of competence levels among primary care physicians in California.)

The two articles[3,4] conclude that some health care providers hold prejudicial attitudes, lack counseling skills, and are uninformed about proper diagnostic approaches to AIDS and appropriate patient-management procedures. We must be careful not to condemn the subjects of this research for negligence or malpractice, just as we must be careful not to blame the victims of AIDS for their condition. Practitioners who participated in these surveys took time from their busy schedules to complete survey instruments. Physicians are among the most talented and well-trained members of our society; AIDS cannot be controlled without their cooperation and support. Now that some problems have been identified, solutions must be developed and implemented quickly, and remedies must be revised as evaluation research monitors responses over time.

A major part of the solution to AIDS depends on the rapid dissemination of accurate information. The Centers for Disease Control has published over 100 articles in the *Morbidity and Mortality Weekly Report*, the popular media have drawn our attention to the fine work of dedicated physicians and other health care providers,[8] and the Editor of this Journal has given us precious space to publish scientific articles, letters, and legal commentaries on AIDS in addition to his own perceptive insight into the problem.[9] A conference held earlier this year (February 1987) in Atlanta debated the role of the HIV-antibody test in screening large segments of the population and concluded that there was no place for mandatory testing at this time in our society. Future conferences will focus on the problem of AIDS for racial and ethnic minorities, many of whom already suffer from other serious conditions associated with poverty, discrimination, and social injustice.

There seems to be no end to the material being generated to educate us about the dimensions and severity of AIDS throughout our shrinking planet. Yet many important messages are either not being received or acted on because time is limited for the practitioner to listen, absorb, and assimilate all the information available. More effective responses to the AIDS crisis must penetrate these barriers. Furthermore, some interventions must transcend the traditional limits of medicine to address societal problems inextricably associated with the transmission of this lethal virus. Additional attention to the last two elements in our theoretical model, especially the constantly changing sociocultural environment and the patterns of human interaction that evolve as doctors interface with patients, should help.

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