



Michael J. Dunn, MD

Dean's Corner

HIV/AIDS interventions and research have significance at home and abroad

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It's a small world, especially as it pertains to the impact of an infectious disease such as HIV. From the proliferation of human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) cases across the ocean to the persistence of the disease in the United States, we are all affected in some way. Unfortunately, the world can seem quite large when attempting to weaken the threat of a deadly disease. Researchers at the Medical College of Wisconsin, however, have developed significant interventional tools to cultivate knowledge about HIV prevention, and then transfer that knowledge to the people who need it most.

The Medical College's Center for AIDS Intervention Research (CAIR) is 1 of only 5 HIV behavioral research centers in the United States designated and funded by the National Institute of Mental Health, and it is the only one not located on the East or West coast. Jeffrey A. Kelly, PhD, Professor of Psychiatry and Behavioral Medicine, directs the center and has devoted the past 20 years of his research career exclusively to HIV/AIDS prevention.

CAIR engages in prevention activities at several different levels. It addresses primary prevention by

developing, conducting, and scientifically evaluating the effectiveness of programs to reduce the risk for HIV/AIDS in populations vulnerable to the disease. Its secondary prevention strategies involve identifying ways to improve coping, mental health, and physical health among people living with HIV/AIDS. CAIR also develops innovative strategies for quickly conveying important findings in HIV research to service providers, public health agencies, and community-based organizations nationally and worldwide, so those on the front lines can directly benefit from the center's research findings.

Since its inception as a center, CAIR investigators have collectively published 600 scientific articles. The center collaborates with hundreds of AIDS service organizations, health departments, and public health programs in all US states and in almost 100 countries, and Medical College scientists have been awarded nearly \$90 million in extramural research grants since 1994. The bottom line, though, is that their work has provided the world with valuable approaches to helping lessen the spread of HIV and AIDS.

More than 40 million people worldwide have HIV/AIDS, and

97% of the world's HIV cases are outside North America. Nations formerly part of the Soviet bloc are experiencing the most rapid rise of HIV infection. In Bulgaria, for example, the Roma (Gypsies) are at particularly high risk for HIV transmission as they live in extreme poverty, with widespread drug abuse and prostitution, and little education. CAIR has a strong presence in such places. Together with Bulgaria's Health and Social Development Foundation, CAIR implemented a program that trains Roma social leaders in HIV/AIDS prevention skills; the leaders then teach within Roma social networks about risk reduction behaviors, disseminating information to the population as a whole.

This model of intervention, based on Dr Kelly's studies on the impact of individual, group, social network, and community-level HIV prevention methods, has also been successful in the United States, where 40,000 to 50,000 people continue to contract HIV each year. The intervention enlists popular opinion leaders from within at-risk community subsets to endorse risk-reducing behavior changes among others in their everyday social networks.

These natural leaders are people whom others in the commu-

nity trust and respect, which is the key to the intervention's ability to influence decisionmaking. Once leaders are identified, they are trained to talk about AIDS and convey prevention messages to others in their everyday conversations. CAIR conducts this research, as well as evaluations of various AIDS education programs, within populations most at risk, including inner-city women and adolescents; gay men; people who are homeless, have severe mental illness, or have substance use problems; and people leaving prison.

Twelve Medical College faculty in the Department of Psychiatry and Behavioral Medicine have full-time appointments at CAIR. Twenty other faculty devote partial effort to CAIR projects, and the center employs about 55 research and administrative personnel in addition to postdoctoral fellows trained in 1 of its 2 NIH-supported HIV prevention fellowship programs.

CAIR benefits from its ability to leverage the medical expertise of Medical College faculty in other departments. For example, Michael O. Frank, MD, associate professor of Medicine (Infectious Diseases), is a core faculty member for CAIR's secondary prevention group, acting as a medical HIV expert and consultant on some CAIR studies.

Doctor Frank leads HIV/AIDS clinical research efforts through the Froedtert & The Medical College of Wisconsin Infectious Diseases Clinic. At any given time, there are 5-10 active clinical trials of experimental medications for HIV and AIDS there.

Doctor Frank's team is researching new treatments and management strategies for HIV infection. The efforts include pharmaceutical company trials, experimental

agents, and new combinations of drugs already approved and in use. Most involve patients whose HIV infections are resistant to the typical drug protocol. Additional trials are evaluating medications for other HIV/AIDS associated problems, such as peripheral neuropathy.

The Medical College is also a clinical site for the Community Programs for Clinical Research on AIDS (CPCRA), an NIH-funded multi-center clinical trial network. This affiliation enables the College to participate in promising clinical trials that drug companies would not consider sponsoring.

A current study is the SMART (Strategies for Management of Anti-Retroviral Treatment) trial, which is testing the hypothesis that once a patient has been successfully treated for HIV, ie their immune system is recovered to normal CD4+ counts, it is better for them to discontinue their medication. Success rates are high for treating HIV through medication, but drugs' toxicity causes many debilitating problems, especially long-term. Doctor Frank believes that this study has the potential to show that cycling patients on and off HIV medication based on their CD4+ levels is in the best interests of the patient.

Our capability to treat HIV, however, has presented a new challenge—the perception that HIV is a less-threatening disease. Prevention messages then become harder to get across, and HIV infections can begin to rise, as they did last year in the Milwaukee area. This phenomenon underscores the importance of confronting HIV/AIDS, and all infectious diseases, with one eye on prevention, the other eye on treatment, and both eyes wide open.

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