

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.jfda-online.com

HIV: Seek, test, treat, and retain



Jacques Normand^{a,*}, Julio Montaner^b, Chi-Tai Fang^c, Zunyou Wu^d,
Yi-Ming Chen^e

^a National Institute on Drug Abuse, Bethesda, MD, USA

^b British Columbia Centre for Excellence in HIV/AIDS, University of British Columbia, Vancouver, BC, Canada

^c National Taiwan University College of Public Health, Taipei, Taiwan

^d National Center for AIDS/STD Control and Prevention, China CDC, Beijing, China

^e Center for Infectious Disease and Cancer Research, Kaohsiung Medical University, Kaohsiung City, Taiwan

ABSTRACT

Keywords:

HIV
Retain
Seek
Test
Treat

The “HIV: Seek, Test, Treat, and Retain” session was chaired by Dr Jacques Normand, the director of AIDS Research at the US National Institute on Drug Abuse. Dr Yi-Ming Chen served as the discussant. The three presenters (and their presentation topics) were: Dr Julio Montaner (Treatment as Prevention—The Key to an AIDS-free Generation), Dr Chi-Tai Fang (Population-level Effect of Free Access to HAART on Reducing HIV Transmission in Taiwan), and Dr Zunyou Wu (Challenges in Promoting HIV Test and Treat Strategy in China).

Copyright © 2013, Food and Drug Administration, Taiwan. Published by Elsevier Taiwan LLC. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

1. Introduction

To eliminate the global HIV/AIDS epidemic, there is a need to promote the “seek, test, treat, and retain” (STTR) strategy [1]. STTR involves reaching out to high risk, hard to reach drug abusing groups who have not been recently tested for HIV (seeking), engaging them in HIV testing (testing), initiating, monitoring, and maintaining treatment for those testing positive (treating), and retaining patients in care (retaining).

2. Presentations

2.1. The British Columbia, Canada, experience

Dr Montaner is a Professor of Medicine at the University of British Columbia (UBC) and is the Director of the British

Columbia Centre for Excellence in HIV/AIDS. In his talk, Dr Montaner showed data from a series of studies demonstrating that the use of highly active antiretroviral therapy (HAART) has led to dramatic decreases in morbidity and mortality among HIV-infected individuals. Further, HAART can prevent HIV transmission among injection drug users (IDUs), as validated within the ALIVE cohort in the United States, and as evidenced by a > 65% decrease in HIV new diagnoses in BC between 1996 and 2010. Recently, the HPTN052 clinical trial showed a 96.3% decrease in the risk of HIV transmission with immediate application of HAART, a 41% decrease in disease progression and death, and an 83% reduction in the incidence of tuberculosis. In Canada, the BC government implemented an initiative known as Seek and Treat for Optimal Prevention of HIV/AIDS in BC (STOP HIV/AIDS in BC) in 2009, and as a result, morbidity, mortality, and new HIV diagnoses have continued to decrease steadily

* Corresponding author. Director of AIDS Research Program, National Institute on Drug Abuse, 6001 Executive Boulevard, MSC 9581, Bethesda, MD 20892, USA.

E-mail address: jnormand@nida.nih.gov (J. Normand).

in BC. Dr Montaner concluded that expanding access to HAART is a key strategy in moving toward an AIDS/HIV-free generation, but the necessary political will needs to be secured to implement the strategy on a global level, in order to fully capitalize on the promise of HIV treatment as prevention. Details of this presentation can be found in the article by Hull and Montaner [2] included in this special issue.

2.2. The Taiwan experience

Dr Chi-Tai Fang is an infectious diseases epidemiologist at the National Taiwan University College of Public Health. Dr Fang stated that both HIV infection and AIDS became reportable diseases in Taiwan in 1984. Taiwan established a nationwide surveillance system for HIV infection in 1989 and adopted a policy to provide all HIV-infected citizens free access to HAART since 1997. By the end of 2002, the cumulative number of HIV-infected citizens in Taiwan reached 4390 (0.019% of the total population). Dr Fang's research team applied an exponential model of HIV epidemic evolution to the national HIV surveillance data (1984–2002), in order to estimate the HIV transmission rate [3]. After the implementation of universal access to HAART, the estimated HIV transmission rate decreased by 53% (0.391 vs. 0.184 new cases per prevalent case-year; 95% confidence interval: 31%–65%). Thus, the study concluded that providing universal access to HAART contributed to the control of the HIV epidemic in Taiwan. This study finding was subsequently validated by Dr Montaner in BC, was cited by the World Health Organization as supportive evidence for scaling up global HIV treatment, and became the basis of the current “treatment as prevention” paradigm. While universal access to HAART can reduce HIV transmission, Dr Fang cautioned that it is not a substitute for safer sex and harm reduction services. HIV epidemics can be effectively reversed and controlled with the combination of providing universal access to HAART and harm reduction services.

2.3. The China experience

Dr Zunyou Wu is the director of the National Center for AIDS/STD Control and Prevention, China CDC, and an adjunct Professor of Epidemiology at UCLA. In his talk, Dr Wu stated that due to a large-scale HIV testing campaign that started in China in 2004, the number of people being tested for HIV has increased significantly from 23 million in 2007 to 101 million in 2012, and the number of newly identified HIV cases has increased from 48,074 to 82,434. However, the number of HIV cases identified still account for < 50% of the total existing HIV cases. Further, about one-third of those individuals were identified at a late stage (CD < 200 at the first time of HIV diagnosis) and had been infected over 5 years. Meanwhile, the number of AIDS-related deaths continues to be high (about 20,000 per year). Starting in 2011, China has taken further bold steps to promote HIV testing and treatment, with targets set for each province across the nation. This effort has significantly improved the identification of infected individuals, and the number of new patients receiving treatment has

increased, which should reduce HIV incidence as well as mortality.

However, there remain several challenges in China. First, HIV services are not very efficient; < 15% of those treated achieved viral suppression. Given this low efficiency, it is difficult to achieve the goal of “treatment as prevention.” Second, even though China has made considerable efforts in increasing HIV testing, the proportion of people being diagnosed late is still high (e.g., 28% in 2011 and the past year), particularly among those provinces hit hard by HIV (e.g., Hunan, Quansi), which indicates that HIV testing services are not adequate. Third, given the low coverage of IDUs, they have very high mortality rates. Now, China is at a crossroads of HIV treatment policy, with three potential choices for providing treatment for: (1) CD4 < 350, and all pregnant women (regardless of CD4 level), and discordant couples (regardless of CD4 level); (2) all of the groups in Choice 1 plus high-risk groups; and (3) universal or all cases. However, treatment takes considerable resources. The current debate is moving from Choice 1 to 2, but not Choice 3 yet. Therefore, continued advocacy is still needed.

Dr Yi-Ming Chen is the vice president and director of the Center for Infectious Disease and Cancer Research of Kaohsiung Medical University in Taiwan. Dr Chen commented that in addition to HIV testing and identification, risk factors for HIV infection should also be investigated. After an individual has been identified as being HIV-positive, counseling and partner notification should be considered to prevent further HIV transmission. Dr Chen offered additional information on HIV virus research in Taiwan, mostly based on molecular epidemiological studies conducted by his research team.

3. Discussion

In the discussion session, there was some dialogue on the importance of specifying the status of IDUs (active, in treatment, etc.), as well as the importance of considering genotype and viral load (e.g., these genetic data are important for understanding the social context and viral context, as opposed to putting people in specific boxes). A point was made about the defunding of HIV prevention efforts in many parts of the world, because HIV infection and progression to AIDS has been reduced and therefore is considered a less urgent matter by policymakers. The question is how to continue the funding in order to sustain these efforts. In Canada, efforts are needed to change the defunding problem. In China, funds for AIDS areas increased slightly this year, but the number of cases enrolled for antiretroviral therapy is huge, which consumes a considerable amount of the funding, resulting in reduced funds for education and other programs but not the harm reduction programs. In Taiwan, studies on harm reduction programs provided evidence of their cost-effectiveness. Therefore, the funding for HIV/AIDS has not been reduced. It was concluded that joint efforts to pool resources to continue funding streams should be considered.

REFERENCES

- [1] Volkow ND, Baler RD, Normand JL. The unrealized potential of addiction science in curbing the HIV epidemic. *Curr HIV Res* 2011;9:393–5.
- [2] Hull M, Montaner J. HIV treatment as prevention: The key to an AIDS-free generation. *J Drug Food Anal*.
- [3] Fang CT, Hsu HM, Twu SJ, et al. Decreased HIV transmission after a policy of providing free access to highly active antiretroviral therapy in Taiwan. *J Infect Dis* 2004;190: 879–85.