MANAGING HIV INFECTION IN THE ERA OF VIRAL CONTROL 2-4

MARCH 2008



Public Health **Strategic**Health Care Group

Data for Public Health Action

Experts agree that the three core, or essential, functions of public health are: assessment (monitoring population health status); formulation of sound policies to guide public health practice; and assurance that populations are receiving needed community and clinical preventive services. To be successful, all three core functions rely on access to sound and timely data.

When we think of data, most of us tend to think of "numbers." And certainly, quantitative information is vital to successful public health efforts. The HIV article in this issue underscores the importance of assessing and addressing the co-morbid conditions that can impact the health of veterans who are living longer than ever before with HIV (see "Managing" HIV Infection in the Era of Viral Control: Aging, Co-morbidities, and Polypharmacy"). But data can also be qualitative in nature, such as describing the programmatic steps that are necessary to improve female veterans' access to smoking cessation services, thereby helping to ensure that female veterans who want to stop tobacco use are successful in their efforts (see "Promoting Women's Health through Access to Gender-Specific Smoking Cessation Services").





Another important source of qualitative data are the day-to-day experiences — good and bad — of our front line providers who strive to provide the highest quality medical and preventive services to the veterans in their care. A recent example of this type of data can be found at

www.hiv.va.gov/vahiv?page=prtop02-va-10.

The "Provider Feedback Forum on HIV Diagnosis and Care" was a day long meeting in which VA health care providers from 22 states, Puerto Rico, and the District of Columbia, shared their insights about how to improve the diagnosis, treatment, and ongoing care of HIV-infected veterans. A similar forum of VA providers convened to discuss smoking and tobacco use cessation in early December 2007. Participants' observations from both meetings were quite valuable.

We hope the information in this newsletter will help provide some of the "data" you need to support you in your efforts to provide the highest quality care to our veterans.

Wishing you Good Health,

Kon Valdisevi

Ronald O. Valdiserri, M.D., M.P.H. Chief Consultant, Public Health SHG

(Mission:)

The Public Health Strategic
Health Care Group (PHSHG)

is a key organizational component of the Office of Public Health and Environmental Hazards, U.S. Department of Veterans Affairs (VA). PHSHG's mission is to improve the health of veterans through the development of sound policies and programs related to several major public health concerns, including: HIV infection, HCV infection, seasonal influenza, smoking and tobacco use cessation, and emerging infections of public health significance — including health care-associated infections.



Managing HIV Infection in the Era of Viral Control:

Aging, Co-morbidities, and Polypharmacy

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Center for Quality Management in Public Health

Advances in science and clinical care have transformed HIV from the rapidly fatal syndrome first reported in 1981 to a condition that more and more resembles a chronic disease. Antiretroviral therapy (ARV) options have evolved to allow simpler, more tolerable regimens, resulting in improved adherence and expanded use in patients once considered poor treatment candidates. Consistent use of chronic ARV therapy has led to dramatically lower rates of opportunistic infections and malignancies secondary to severe immune suppression.

HIV+ veterans have received years, if not more than a decade, of ARV therapy while under VA care, leading to new issues, including pill fatigue and long-term side effects such as metabolic complications. In addition, increased survival translates into an aging HIV+ population and the consequent onset of age-related conditions which further complicate clinical management and affect quality of life.

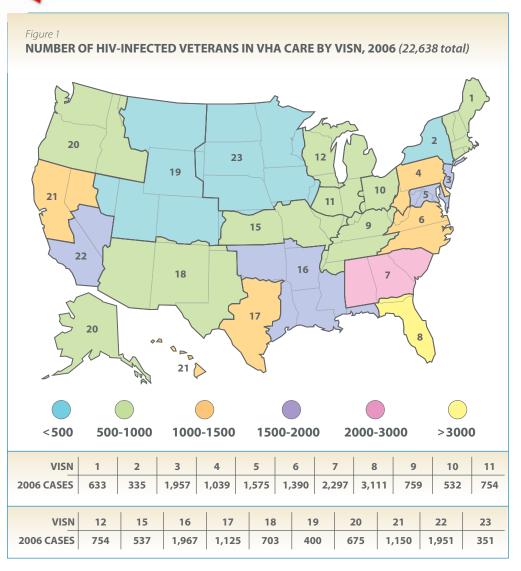
HIV+ Veterans in Care

An essential step in planning care is to understand the characteristics of the population in need. At the end of 2006, VHA's HIV population consisted of approximately 23,000 veterans, the majority were male (97.5%), 36% were African American, and 30% were White. The median

age of HIV infected veterans in care is 51 years with 57% at or above 50 years of age. One hundred twenty-seven facilities reported providing care to HIV infected veterans in 2006, with 48 facilities caring for 200 or more veterans with HIV, 46 facilities caring for between 50 and 200, and 33 facilities caring for 1 to 50 in 2006. While some VISNs care for a small number of HIV infected veterans (335), others have substantial numbers in care (2,297).

(**See Figure 1.** VISN-level aggregated data can be found in the table at the foot of Figure 1.)

With respect to HIV infected veterans in care, relatively small numbers have severe immune deficiency with <10% and 2.3% meeting prophylaxis thresholds for *Pneumocystis jiroveci* pneumonia (PCP) and disseminated *Mycobacterium avium complex* (MAC), respectively. In 2006, 76% of HIV+ veterans in VHA care received ARV therapy.





C and HIV/hepatitis C virus co-infection in vulnerable populations" AIDS 2005; 19 (Suppl 3): S13-S19). Not surprisingly, the prevalence of cirrhosis (2.8%) and decompensated liver disease (1.5%) is substantial among veterans with HIV infection — likely due to chronic viral liver disease and/or substance abuse. Alcohol use is of particular concern among HIV/HCV co-infected veterans, as it contributes to more rapid hepatic disease progression and may increase hepatic toxicity from ARV drugs. Client-centered brief interventions may be an effective strategy to encourage these patients to modify risky behaviors, such as heavy alcohol consumption. Also, depression has been diagnosed in one-half of the HIV population in care (with or without HCV), highlighting the potential need for more integrated care with mental health services.

Lipid abnormalities, reported in 42% of HIV infected veterans in 2006, are common among HIV/AIDS patients

on ARV. Lipid abnormalities are due to the HIV infection itself, as well as treatment with antiretroviral drugs. Because of the association between lipid abnormalities and atherosclerosis, providers are concerned about the long-term cardiovascular risks to HIV infected patients with untreated lipid abnormalities. Hypertension, found in 50% of HIV infected veterans in 2006, should also be treated as it can increase the risk of cardiovascular and renal disease. Current guidelines suggest that HIV infected adults with lipid abnormalities should be managed according to the National Cholesterol Education Program Guidelines (see "Guidelines for Dyslipidemia in HIV" Clincal Infect Dis 2003; 37:613-627). Renal insufficiency, another condition associated with both aging and treatment toxicity, occurs in about 5% of HIV infected veterans, underscoring the importance of monitoring and adjusting doses of both HIV and non-HIV related medications.

Importance of Co-morbidities

While increasing survival is welcome news, it adds complexity to the care required by HIV+ veterans.

Figure 2 displays the 10 most prevalent co-morbid conditions observed in at least 20% of the HIV infected veterans in care during 2006. It is important to note that many of these conditions may be associated with the HIV disease itself, ARV therapy, interactions with other medications, or the effects of aging.

Based on cumulative reports, some 31% of HIV infected veterans in care have "ever" had a diagnosis of HCV infection. Previously published analyses have revealed that HIV/HCV co-infected veterans were more likely to have diagnoses of mental illness, depression, alcohol, and substance abuse compared with veterans who were infected with HIV alone (see Backus et al.: "HIV, hepatitis

CO-MORBID CONDITIONS OCCURRING IN >20% OF HIV INFECTED VETERANS, 2006 (22,638 TOTAL)



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"VHA's ability to record, track, and report on health care utilization is a key asset to our health care delivery system and a valuable tool in monitoring the quality of care."



Polypharmacy and the Aging HIV Veteran

Clinicians sometimes use ritonavir to "boost" other ARVs, which can result in decreased pill burden and dosing frequency. However, boosting with ritonavir can also result in dangerous interactions with certain medications used to manage co-morbid conditions. Many recognized interactions occur via inhibition or induction of cytochrome P450 (CYP450) isoenzymes. VA's CPRS system provides medication order checks for the major interactions but in the rapidly changing field of HIV medicine, newly identified issues sometimes lag behind software updates. A full discussion of drug interactions is beyond the scope of this newsletter, and we encourage VHA clinicians to consult their local clinical pharmacists. Another option for monitoring the use of specific co-administered medications is through the Combined Labs and Medications report in the local CCR software package. Please see the sidebar in this newsletter for details on the use of this important population management tool.

Delivery of Care – Multiple Clinics and Multiple Stations

The presence of co-morbid conditions, whatever their etiology, can complicate clinical care for both patients and providers. Patients must manage the demands of appointments in multiple clinics, including scenarios where veterans attend specialty clinics at VA facilities different

from the ones where they receive their primary care. Care coordination becomes extremely important, as increasing numbers of appointments increase the risk for schedule conflicts, transportation difficulties, absence from work, interruption of family obligations (including child care), and other issues. See the sidebar for information on using CCR to help track veterans who may be at risk for lapses in/ or inadequate follow up.

The Future

VHA's ability to record, track, and report on health care utilization is a key asset to our health care system and a valuable tool in monitoring the quality of care. CCR data can also help to inform clinical training priorities and the development of needed patient and provider educational tools. Using CCR registry data to inform decision making at the local level depends on the work of the designated registry coordinator at each facility. These dedicated VA staff members play an important role in VHA's HIV care program and deserve a note of thanks, for without them, these valuable data would not be available. By supporting the coordinator's role and taking advantage of the tools offered in the local CCR software, clinicians can become empowered to better manage their local population as HIV care becomes more complex in an aging population.

CCR REPORTS –A TOOL FOR CLINICAL MANAGEMENT

The Clinical Case Registries (CCR) software used with HIV and Hepatitis C provides more than a dozen customizable reports useful for clinical and administrative tasks.

Here are some highlights:

Combined Meds and Labs Report

- To identify patients at risk for potential interactions from medication combinations (e.g., the protease inhibitor atazanavir when used with proton pump inhibitor (PPI) drugs)
- To monitor potential toxicities related to medications (e.g., anemia in patients receiving ribavirin or zidovudine; clinical monitoring of erythropoietin stimulating agents)

Clinic Follow-up Report

• To identify patients lost to follow up

Patient Medication History Report

• To review patient treatment history

Registry Lab Tests by Range Report

• To review patient response to treatment

Staff members who wish to take advantage of CCR reporting capabilities need to request that their IT support staff add the CCR User key (ROR VA HIV USER or ROR VA HEPC USER) to their profile. CQM and the National Training and Education Office provide monthly support calls for CCR coordinators and users (contact Cathy Morgan in the NT&EO at Cathy.Morgan@va.gov).

Promoting Women's Health through Access to Gender-Specific Smoking Cessation Services

Natara Garovoy, Ph.D., M.P.H.

Women's Prevention, Outreach and Education Center, VAPAHCS, Menlo Park Division

Overview

The Women's Prevention, Outreach and Education Center (WPOEC) is a new outpatient mental health program at the VA Palo Alto Health Care System (VAPAHCS), Menlo Park Division. WPOEC is designed to be a model program for the provision of clinical care, outreach, education, and research for mental health and wellness issues unique to or prevalent among our Nation's rapidly growing female veteran population. The increasing numbers of women veterans returning from Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) requires a specialized focus on developing and implementing best practices for health promotion for women, and WPOEC's Women's Stepped-Care Smoking Cessation program (WSSC) is an example of efforts to develop gender-specific services.

Smoking is the leading cause of preventable death among women¹, and women who actively participate in health promotion programs have been shown to be more likely to quit successfully². However, the rate of attendance by women at smoking cessation clinics throughout VA is surprisingly low.

This program (see sidebar) aims to improve access to a full range of smoking cessation services for women through the provision of gender-specific care by integrating with women's primary care, reproductive health and mental health visits, using a stepped-care model. Stepped-care is a health care service delivery model that aims to reduce symptoms of chronic illness ³ and has been used successfully to treat tobacco use disorders ⁴. The model is designed to expand access to care and increase intensity of service based on level of need.

Resources and Affiliated Programs

WPOEC benefits from its close collaboration with the Women's Health Center (WHC) and the Women's Trauma Recovery Program (WTRP). The WTRP, opened in 1992, is the longest running posttraumatic stress disorder

OBJECTIVES OF THE WOMEN'S STEPPED-CARE SMOKING CESSATION PROGRAM

- to increase quit attempts by women through access to smoking cessation services during routine women's primary care and reproductive health visits
- to develop and implement telephonebased care services for all women interested in supportive quitting
- to integrate individual face-to-face smoking cessation counseling for women identified as needing more intensive treatment (e.g., women receiving treatment for posttraumatic stress disorder)



(PTSD) residential rehabilitation program for women in the country and has been a leader in adapting empirically supported treatments for PTSD to the needs of women veterans. The WHC provides specialized primary care for women, including preventive health, reproductive and gynecological health services, and osteoporosis screening in an environment dedicated to women. Most recently, a second, gender-specific clinic has been established, the Returning Women's Health Connection Clinic (RWHC), an integrated, interdisciplinary, primary care clinic dedicated to OEF/OIF women. Collaborations with these programs form a strong base from which to increase access to smoking cessation resources during routine primary care and reproductive health care visits, and to launch an integrated model of smoking cessation care within mental health visits.

Initial Brief Counseling and Nicotine Replacement Therapy

Patient services begin by providing access to and initiating smoking cessation in WHC and RWHC clinics. The initial session utilizes behavioral techniques and provides pharmacotherapy according to VA/DoD published guidelines⁵, including:

- · assessing current tobacco status
- assessing nicotine tolerance and dependence
- providing motivational interviewing (MI) for readiness to quit
- screening and assessment for co-morbid psychiatric conditions
- providing pharmacological treatment as appropriate
- providing self-help education materials

To facilitate the use of these guidelines, the smoking cessation program at VAPAHCS has established prescribing procedures for psychologists. The psychologist reviews the patient's medical records and health history and agrees upon a nicotine replacement therapy (NRT) plan with

the physician or nurse practitioner who writes the initial prescription. Subsequent orders to renew or decrease NRT are then made by the psychologist. On occasion, the oral or nasal inhaler may be prescribed when the nicotine patch appears insufficient or in the case of allergic reaction to the patch. Bupropion can also be prescribed for patients who are without evidence of head injury or seizure. If bupropion and nicotine replacement are not effective, varenicline may be prescribed. All patients on prescription medications for smoking cessation have a regular in person follow-up.

Telephone-Based Counseling

Women are referred to a 12 month long telephone-based follow-up service once the initial session is complete, with NRT provided by mail. All women veterans interested in supportive quitting qualify for this service. Telephone counseling consists of 15 minute calls once a week until the veteran is no longer in need of NRT. Once NRT has been completed, the veteran continues to receive calls once a month for 15 minutes for maintenance and relapse prevention. Telephone counseling is multimodal. The calls address:

- health education on the benefits of quitting for women (e.g., reduced risks for cancer and heart disease)
- perceived risks and benefits of quitting for women (e.g., concerns around weight gain ^{6,7}, managing negative affect ⁸)
- problem solving skills (e.g., preparing one's environment)
- · encouraging social support
- · setting a quit date
- preparing for relapse

Integrated Care for Women with PTSD

The stepped-care program also includes six individual face-to-face smoking cessation counseling sessions for women receiving outpatient services for PTSD through WPOEC. PTSD has been associated with higher smoking rates⁹ and lower quit rates¹⁰, and its symptoms have been identified as potential antecedents to smoking behavior¹¹. Furthermore, preliminary evidence suggests that women veterans with negative emotions or moods are more likely to smoke¹² and that these negative feelings may be an important factor influencing smoking behavior¹² and quit attempts 8,13 among women. Together, this body of literature highlights the importance of addressing smoking cessation via gender-specific interventions. In addition, integrated care for smoking cessation has been shown to be effective for patients with PTSD14. Counseling addresses the issues above, in addition to negative affect and antecedents of smoking specific to PTSD (e.g., intrusive memories of past trauma). NRT for women enrolled in this program is available for pick-up at the pharmacy. Once the six individual sessions have been completed, women are referred to the telephone-based program and continue with NRT by mail.

Program Development and Evaluation

For the most part, currently available health education materials pertaining to smoking do not specifically address the needs and concerns of woman veterans. As part of WSSC, smoking cessation materials tailored to women veterans are being developed. The creation of relevant images and smoking cessation messages for women may help to increase access to and utilization of this program. Additionally, systematic assessment of smoking behavior, nicotine dependence, confidence to quit, NRT methods, and benefits of health education materials help to inform ongoing quality improvement efforts.

The WPOEC's Women's Stepped-Care Smoking Cessation Program represents a new model of care to address smoking and tobacco use cessation in VHA. These efforts may well lead to new best practices in delivering quality, gender-specific services to female veterans.

The following individuals are acknowledged for their roles in this program: Suvarna Akki, M.D., Robert Hall, Ph.D., ABPP, Susan Frayne, M.D., M.P.H., Samina Iqbal, M.D., Rachel Kimmerling, Ph.D., Ann Thrailkill, NP., Renee Wagner, MSW, Deborah Welborn, LCSW, and Darrah Westrup, Ph.D.



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8. Zelman DC, Brandon TH, Jorenby DE, Baker TB. Measures of affect and nicotine dependence predict differential response to smoking cessation treatments. J Consult Clin Psychol. 1992;60(6):943-952. 9. Vlahov D, Galea S, Resnick H, et al. Increased use of cigarettes, alcohol, and marijuana among Manhattan, New York residents after the September 11th terrorist attacks. AmJ Epidemiol. 2002;155:988-996. 10. Lasser K, Boyd JW, Woolhandler S, Himmelstein DU, McCormick D, Bor DH. Smoking and mental Illness: A population-based prevalence study. JAMA. 2000;284:2606-2610. 11. Beckham JC, Feldman ME, Vrana SR, et al. Immediate antecedents of cigarette smoking in smokers with and without posttraumatic stress disorder. Am J Prev Med. 1996;12(5):367-377. 14. McFall M, Saxon AJ, Thomp

Advances in HIV testing

This review article describes the evolution of HIV testing technology and discusses current advances in HIV testing. The author provides useful clinical information (e.g., sensitivity and specificity, specimen requirements, etc.) for the six rapid tests for HIV antibody detection approved by the Food and Drug Administration (FDA) since 2002. Additionally, this article provides information on the use of RNA testing on pooled HIV antibody negative specimens as a means of identifying early HIV infection before seroconversion has taken place. The author opines that this increasing array of HIV tests can be used to diagnose the estimated 252,000-312,000 persons in the U.S. who are currently unaware that they are infected with HIV.

Branson BM. State of the art for diagnosis of HIV infection. Clin Infec Dis. 2007; 45:5221-5225.

HIV status in tuberculosis patients

Knowledge of HIV status among tuberculosis (TB) patients enables optimal patient management and treatment with highly active antiretroviral therapy which can reduce progression to TB disease. An analysis of HIV status among persons reported with TB to the U.S. National TB Surveillance System between 1993 and 2005 revealed that reporting of HIV status among TB patients in the U.S. increased from 35% in 1993 to 68% in 2003. However, 31% of reported TB patients in 2005 still had unknown HIV status. Overall, 9% of TB patients were HIV positive in 2005 and TB patients at greatest risk for HIV infection were: injection and non-injection drug users, homeless persons, African Americans, persons who abuse alcohol, and those who are incarcerated. Health care providers should promote HIV testing among patients with TB.

HIV status of tuberculosis patients – US, 1993 – 2005. *MMWR*. 2007; 56:1103-1106.

Labor unions' role in tobacco control policy

Labor unions have historically played an important role in health promotion of workers and in eliminating exposures to hazardous workplace exposures. They can also be important partners for the tobacco control and public health community. This article

provides a very thoughtful review of the work that has been done through coalitions of tobacco control communities and organized labor to make progress in the areas of smoking cessation programs, smoke-free worksite policies, and increased insurance coverage of smoking cessation treatments.

Barbeau B, DeLaurier G, Kelder G, et al. A decade of work on organized labor and tobacco control: Reflections on research and coalition building in the United States. J Pub Health Pol. 2007;28:118-135.

Mortality from hepatitis C and heavy alcohol use

This epidemiological study analyzed 7,263,163 death records from public-use data files compiled by the National Center for Health Statistics (NCHS) and found that the combination of heavy alcohol use (HAU) and hepatitis C (HCV) infection reduced mean age of death and increased cumulative probability of death (using multiple-cause life table analysis) when compared to HCV related deaths without HAU. The effect of HAU on HCV mortality was especially prominent among females, whose mean age of death was shortened from 61.0 years (HCV without HAU) to 49.1 years (HCV with HAU), compared to males (mean age of death shortened from 55.1 to 50.0 years, respectively).

Chen CM, Yoon Y, Yi H, et al. Alcohol and hepatitis C mortality in males and females in the United States: A life table analysis. Alcohol Clin Exp Res. 2007;31:285-292.

Baclofen reduces alcohol craving

Baclofen, an inexpensive GABA B-receptor agonist, is considered safer for the liver than other anti-craving drugs for alcohol abuse (e.g., naltrexone), probably due to its low liver metabolism. This randomized, placebo-controlled trial indicated that cirrhotic patients taking oral baclofen achieved and maintained abstinence at a significantly higher rate (30/42, 71%) than cirrhotic patients assigned to placebo (12/42, 29%), with no hepatic side-effects noted. The baclofen group also reported a significant reduction in alcohol craving and demonstrated significant improvement in biochemical tests of liver functioning.

Addolorato G, Leggio L, Ferrulli A, et al. Effectiveness and safety of baclofen for maintenance of alcohol abstinence in alcohol-dependent patients with liver cirrhosis: Randomised, double-blind controlled study. *Lancet*. 2007;370:1915-22.

APRIL 7-13, 2008 IS NATIONAL PUBLIC HEALTH WEEK

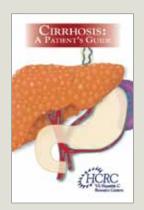
This yearly observance enables public health and medical professionals to emphasize the importance of providing consistent and high-quality public health services to the patients, communities, and populations they serve.

VA Public Health Portal Links

- Public Health Strategic Health Care Group www.publichealth.va.gov/about/pubhealth
- VA Smoking & Tobacco Use Cessation Program www.publichealth.va.gov/smoking
- VA HIV/AIDS Website www.hiv.va.gov
- VA Hepatitis C Website www.hepatitis.va.gov
- Influenza Products & Publications www.publichealth.va.gov/flu

- Infection: Don't Pass It On www.publichealth.va.gov/infectiondontpassiton/
- Center for Quality Management in Public Health www.publichealth.va.gov/quality
- Office of Public Health Surveillance & Research www.publichealth.va.gov/research/surveillance
- Previous Issues of "Public Health Matters" www.publichealth.va.gov/newsletters/ publichealthmatters.asp

 Featured Public Health Product:
 "Cirrhosis: A Patient's Guide"
 www.hepatitis.va.gov/vahep?page=prtop08-01-pe-01



Print copies of this guide can be obtained from the Hines Service and Distribution Center (SDC) via your Forms and Publications Control Officer (IB 10-199, P96211). A full listing of Hepatitis C Resource Center Products can be found at: www.hepatitis. va.gov/vahep?page=princon-hcrc-02.

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If you have any comments or suggestions, we welcome your feedback. We will read and consider all comments and suggestions but, due to the large volume of correspondence received, may not be able to reply to each individual directly. Comments about this newsletter can be addressed to: publichealth@va.gov.

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