

## HIV Management Returning to Primary Care Providers

Ronald D. Wilcox, MD, FAAP

Donna M. Gallagher, APRN-C, MS, ANP, FAAN, MA

A 32-year old uninsured woman, living in a rural town in the Deep South, presents to the emergency room at a local hospital with complaints of cough and fever. She is diagnosed with pneumonia and given a prescription for an antibiotic. It takes a few days to raise the money for the prescription but she eventually fills it and improves with treatment. Over the next several months, she goes to three different free-care clinics for vaginal yeast infections. One year after the initial episode of pneumonia, she returns to the same hospital with gradually increasing shortness of breath, a non-productive cough, and a low-grade fever. Her chest x-ray reveals a bilateral interstitial pattern and her PaO<sub>2</sub> [partial pressure of oxygen in arterial blood] is 52. She is admitted to the hospital and clinically worsens over the next 24 hours, requiring intubation. Bronchoscopy reveals the patient has *Pneumocystis jiroveci* pneumonia and the patient is found to be HIV-infected. Her CD4 lymphocyte count is 34 cells/hpf.

This scenario is intended to represent the fact that patients with undiagnosed HIV infection frequently access the health care system several times before they are tested for HIV, resulting in late diagnosis and an AIDS classification (CD4 count <200). It is estimated that over 1,200,000 people in the United States are living with HIV infection; despite extensive efforts for primary prevention, the CDC estimates there are 56,300 new infections annually.<sup>1</sup> The efficacy of HIV treatment has dramatically improved since the mid-1990s, with the introduction of highly active antiretroviral therapy (HAART) resulting in a decrease in the incidence of AIDS-related deaths. Consequently, a steady number of new infections coupled with a decrease in mortality rates results in an increase in the total number of people living with HIV each year.

In 2006, the CDC released its *Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings* (<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm>). In this document, the CDC encourages the routinization of HIV screening/testing for everyone in the U.S. between the ages of 13 to 64 years. When patients initially enter a health care system, they should be asked as part

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**RONALD WILCOX** is the PI/Project Director of Delta Region AIDS Education and Training Center; President, National Alliance for HIV Education and Workforce Development (NAHEWD); and Associate Professor of Internal Medicine, Pediatrics, and Public Health, Louisiana State University Health Sciences Center in New Orleans. **DONNA GALLAGHER** is the PI/Director of New England AIDS Education and Training Center, and Co-Director, Office of Global Health, University of Massachusetts Medical/GSN in Boston. Please address correspondence to Ronald Wilcox at [rwilco@lsuhsc.edu](mailto:rwilco@lsuhsc.edu) or Donna Gallagher at [Dmgallag@aol.com](mailto:Dmgallag@aol.com).

of the initial intake if they have ever been tested for HIV and if they are aware of their results. If the response is negative, a brief risk assessment should be performed and an HIV test should be ordered again at that time if appropriate. The patient is then able to opt out of the test if they do not wish to have it, and this should be documented in the chart (including the reason given for refusal). Written consent is still required in some states, depending on state laws. The initial testing choice is a routine screening test not based on reported risky behavior; repeat testing should be offered as part of a differential diagnosis or based upon a risk assessment of behaviors that put the patient at increased risk for HIV.

Routine HIV screening is a practice now being put into place across medical settings such as emergency rooms, inpatient hospitals, primary care and subspecialty clinics, dental practices, substance abuse treatment centers, and mental health facilities. Opt-out testing is often routinely added to admission and pre-operative screening requirements. To reach the CDC goal that every person should know his or her HIV status, all health care team members must be involved in HIV screening. A well-informed health care team increases the opportunities for a patient to understand the importance of routine HIV testing and positively affects the decision to test.<sup>2</sup>

In July 2010, President Obama's Office of National AIDS Policy (ONAP) released, for the first time, a National HIV/AIDS Strategy (NHAS) for the United States. This document identified three key components to controlling HIV in America: reduce HIV incidence; increase access to care and optimize health outcomes; and reduce HIV-related health care disparities and stigma. The Strategy identifies specific goals and targets and may be seen at <http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf>.<sup>3</sup> To reduce HIV incidence, primary care personnel must test for HIV, not only to identify people infected but also to encourage secondary prevention, counseling people who test negative about ways to decrease risk of future infection, and getting HIV-infected people into care, either by making referrals or by offering HIV management on-site.

The Department of Health and Human Services (DHHS) issues treatment guidelines for adolescents and adults with HIV and a separate set of guidelines for pediatric patients. These guidelines offer a fairly straightforward approach for treatment-naïve patients and are revised on a regular basis.

Minority communities in the U.S. are disproportionately affected by the HIV epidemic. Since 1994, the annual number of AIDS diagnoses is highest in Blacks/African Americans among all races/ethnicities. In addition, the number of deaths attributed to HIV continues to increase. From October 2007–September 2010, of 2,786,739 HIV tests done in the U.S., non-Hispanic Blacks made up 70% of new diagnoses with positivity rates among Blacks 1.6 times those among Whites.<sup>4</sup> Early diagnosis coupled with early access to care is critical in order to ensure that appropriate health care is available for these communities.

The success of HIV care has resulted in the largest number of People Living with HIV (PLWHIV) since the early epidemic. This large number of patients necessitates a workforce that is prepared to provide care over the long term. A large portion of the current HIV care workforce has been involved in care since soon after the disease was initially described in 1981. Much of this workforce is reaching retirement age, and it is becoming increasingly apparent that the HIV care workforce is dwindling. The DHHS

is encouraging primary care personnel to begin assuming day-to-day care for HIV-infected persons engaging in consultant relationships with HIV experts to improve continuity of care, especially in the setting of community health centers. The National Association of Community Health Centers (NACHC) has been encouraging HIV testing at their member sites for several years and is now putting a greater emphasis on the need for HIV management at the centers. Primary care personnel can be involved in HIV care in several different levels ranging from identification of HIV infection through testing and symptom identification with referral to care, assumption of care with co-management *via* consultation with an HIV expert, or accessing training and clinical mentorship opportunities to increase their experience to serve as the experts in HIV management in their own setting.

HIV care is a complex but manageable process that requires a strong relationship between the patient and the health care team. It goes beyond simply prescribing medications for PLWHIV and monitoring labs. A transdisciplinary team approach has been shown to be the most effective way to care for HIV-infected patients. All members of the team are important: the receptionist who is the first line contact, the case manager who coordinates the multiple levels of care and helps the patient access important wrap-around support services, the community health worker who helps the patient manage appointments and medication regimens, the pharmacist who counsels the patients about adherence and dosing and monitors for important drug-drug interactions, the health educator who helps the patient understand importance life-style modifications to enhance their health and improve their life, and the primary care provider. A health care team that provides coordinated care and supports each of its members and the patient is likely to succeed and avoid the burn-out often experienced when providers try to manage HIV care alone.

HIV management training and clinical mentorships are available for medical professionals interested in learning more about HIV testing, care, and management. The Health Resources and Services Administration (HRSA) of DHHS funds a network of AIDS Education and Training Centers (AETCs), currently consisting of eleven Regional centers and five National centers, covering all 50 U.S. states as well as the U.S. territories, dedicated to offering high quality, comprehensive training and education for *all members of the health care team* to enhance the care of people infected or affected by HIV. Each of the Regional centers is made up of Local Performance Sites (LPSs) where training is designed to best apply to the local area they serve. Educational opportunities range from didactic presentations, skills-building interactive workshops, clinical preceptorship training, ongoing clinical consultation and mentoring, to technical assistance and capacity building work. Needs of the trainees are assessed and trainings are then tailored to fulfill the identified needs. The five National centers are centers of specialization and range from an evaluation center, a center for cultural competency training, a resource center, a clinicians' consultation center, and a center working with CHCs serving minority communities. These five National centers complement the services of the Regional centers. The contact information for all of the AETCs is accessible at [www.aidsetc.org](http://www.aidsetc.org); this site also serves as an invaluable resource for a vast array of information about HIV care including links to current treatment guidelines, recorded webinars, and Powerpoint presentations.

As HIV more widely is considered a chronic disease and HIV care is returning more to the primary care workforce, the AETCs are available to support the health care teams starting with those with little experience in HIV to develop the knowledge and skills needed to care for this often underserved population, to those who continue to need ongoing support to continue to provide state-of-the-art care for PLWHIV.

The patient recovers from her episode of *Pneumocystis* pneumonia. The social worker at the hospital realizes that, due to limitations of funding and lack of transportation, the patient will not be able to travel to the nearest HIV specialty clinic, located about an hour away. She contacts a local community health center and finds a nurse practitioner who has some HIV experience. The patient is set up for a follow-up appointment. At the appointment, the nurse practitioner calls the national Warmline of the AETC network (800-933-3413) and is given advice on initial work-up and needed prophylaxis. She is given the contact information for the local AETC and enrolls in a two day training course for the following month. After the course, she regularly contacts the consultation services offered by the local AETC and manages the patient well. As her confidence grows, she begins to offer routine testing of all of the patients seen at her CHC and develops a small group of HIV-infected patients that she manages in partnership with the health care team including the health educator, nurses, physicians, pharmacist in the clinic, and a clinical consultant from her local AETC.

## Notes

1. Centers for Disease Control and Prevention. HIV surveillance report. Atlanta, GA: Centers for Disease Control and Prevention, 2011 Jul. Available at: <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/index.htm>.
2. Branson BM, Handsfield HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health care settings. *MMWR Recomm Rep*. 2006 Sep 22;55(RR-14):1-17;quiz CE 1-4.
3. The White House Office of National AIDS Policy. National HIV/AIDS strategy for the United States. Washington, DC: The White House Office of National AIDS Policy, 2010 Jul. Available at: <http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf>.
4. Centers for Disease Control and Prevention. Results of the expanded HIV testing initiative—25 jurisdictions, United States, 2007–2010. *MMWR Morb Mortal Wkly Rep*. 2011 Jun 24;60(24):805–10.