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HIV-infected adolescents have multiple risk factors for mental illness

A PEER-REVIEWED ARTICLE

April Palmer, MD

Since 1994, rates of perinatal transmission have dropped dramatically due to antiretroviral prophylaxis of HIV-infected pregnant women. Currently only 100-200 new cases of perinatal transmission are seen in the US annually.¹ During the same period, highly active antiretroviral therapy (HAART) has become available for pediatric patients. Perinatally-infected adolescents have been exposed to HAART and in most studies over 50% have successful viral control resulting in longer and healthier lives.²⁻⁵ However, these adolescents have multiple risk factors for mental illness. Living with a chronic disease is associated with increased rates of mental illness and many older adolescents were infected prior to

the advent of HAART and may have had a period of ineffective therapy with resultant uncontrolled viral infection in the central nervous system. Many have lost a biological parent to HIV/AIDS and may be living with another relative or foster parent. These adolescents are also frequently subjected to environments of poverty, crime, and substance abuse. Finally, many have family members with mental illness.^{1,6-7}

The HIV epidemic in adolescents now includes mostly those infected through high risk behavior. Similar to the perinatally-infected adolescent, behaviorally-infected teens generally live in areas of high poverty, crime, and substance abuse. Unlike those infected perinatally, these teens usually live with a biological parent.⁸ Mental illness and substance abuse rates are predicted to be high in this population since

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Low health literacy predicts poor adherence

Daniele Farrisi, MPH

Health literacy is a topic that has been gaining attention in HIV care as well as the healthcare field in general. More than just a buzz word, health literacy is emerging as an important factor in health disparities and adverse health outcomes.

In their *Healthy People 2010* report, the Department of Health and Human Services defined health literacy as “the degree to which individuals have capac-

ity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.”¹ Health literacy is not the same as prose literacy; it is more than just being able to read words on the page. A patient with adequate health literacy is expected to be able to interact with health information: put it in context, recognize important information, make informed decisions, and ul-

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More research is needed on HIV+ adolescents in rural areas

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both are associated with high risk sexual behaviors.

Understanding prevalence rates and types of mental illness in both groups is important to practitioners treating HIV-infected adolescents. In HIV-infected adults, mental illness has been shown to affect adherence to antiretroviral therapy.⁹ Mental illness and substance abuse in the HIV-infected adolescent may lead to poor adherence to antiretroviral therapy and risky sexual practices.

Prevalence rates for psychiatric disorders in perinatally-infected children vary depending on the type of study but generally are 55-61%. The most common disorders found are anxiety disorders (24.3-49%) followed by attention deficit hyperactivity disorders (ADHD) (14-28.6%), conduct disorders (1-12%), oppositional defiant disorders (16.7%), and mood disorders (4.3-25%).^{2,6,7,9} Compared to the general population, psychiatric disorders are higher in HIV-infected children. Gaughan *et al*, in their prospective cohort study of the long-term effects of in utero and/or postnatal exposure to HIV and antiretroviral therapies (PACTG 219C), found the rates of psychiatric hospitalization in HIV-infected children 4-17 years of age to be about six times higher than the general population with most hospitalizations for depression and behavioral disorders. No psychiatric hospitalizations were seen in the HIV-negative population.⁷ Mellins *et al*, using the Diagnostic Interview Schedule for Children IV (DISC-

IV) as a baseline assessment of 9-16 year old HIV-exposed youth, compared rates of psychiatric disorders in HIV-infected and HIV-seroreverters. They found higher rates of psychiatric illness in HIV-exposed children than the general population with slightly higher rates in the HIV-infected than the HIV-exposed but uninfected. The HIV-positive youth had higher rates of ADHD than the HIV-negative youth but rates of other psychiatric disorders were not significantly different between the two groups.⁶ In a prospective observational study comparing HIV-infected children 6 to 17 years of age to a control group consisting of HIV-exposed and uninfected or children uninfected but living in a household with at least one HIV-infected person (IMPAACT 1055), no difference in rates of psychiatric conditions were detected by having the youth and caregivers complete the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) referenced rating scales and Child and Adolescent Symptom Inventory-4R (CASI-4R).²

Similar to perinatally-infected youth, youth infected through high risk behaviors also have higher rates of mental illness than the general population. Pao *et al*, using the Structured Clinical Interview for DSM-IV Axis I Disorders-Patient Edition (SCID-P), found that of the HIV-infected adolescents in their clinic, 85% had a current axis I disorder, 68% had a history of depression, and 44% currently had depression. Medical chart review revealed that 26% had a diagnosis of conduct disorder. A large

percentage reported sexual and physical abuse, 50% and 38% respectively, which may partially explain the exceptionally high rates of mental illness.⁸

Risk factors for mental illness in perinatally-infected and -affected youth have been evaluated in a few studies. Traumatic life events are associated with mental illness in this population. Gaughan found that significant life events were reported three times more frequently in patients hospitalized for psychiatric illnesses.⁷ HIV-associated variables such as CD4 count, CDC stage, ART use, and viral load have not been associated with having mental health disorders, but the relationship of mental illness and knowledge of HIV status varies by study.⁶⁻⁷ In the study by Mellins *et al*, older youth with HIV were more likely to have behavioral disorders than younger HIV-positive youth.⁶ In another study by this same group, having a mother with HIV did not increase mental health disorders in a group of HIV-negative adolescents 10-14 years of age, but knowledge of mother's HIV infection did predict worse mental health problems in this population.¹⁰

Substance abuse is reported in both groups of HIV-infected adolescents. Rates of substance abuse in perinatally-infected youth vary from 2% to 14%, with higher rates seen in older adolescents. Alcohol and marijuana are the most frequently abused drugs.^{3,6} Williams *et al* found in their study (IMPAACT 1055) that substance abuse was associated with having other mental health disorders and lower CD4 counts.



However, when compared to HIV-negative controls, HIV perinatally-infected youth did not have higher rates of substance abuse.³ In the report by Pao *et al*, 59% of their behaviorally-infected youth reported ever having a substance abuse problem.⁸ Older adolescents are at higher risk of substance abuse, which may increase risk-taking behaviors and medication nonadherence. This could explain the association of substance abuse with lower CD4 counts seen in the IMPAACT 1055 study.

HIV clinicians should therefore be aware of possible mental health problems such as anxiety disorders and ADHD in perinatally-exposed/infected youth and mood disorders in behaviorally-infected youth. Therapy for psychiatric conditions in HIV-infected youth includes both behavioral and pharmacologic therapy. Approximately 20% of HIV-infected youth are treated with psychotropic drugs and between 25-50% receive some form of behavioral intervention.^{2,6,8} Psychotropic medications most frequently used include stimulants for ADHD, antidepressants, and antipsychotics for mood disorders.¹¹ When compared to HIV-exposed but uninfected youth, HIV perinatally-infected youth are more likely to be treated with medications and behavioral therapy for mental disorders.² This difference may be explained by a disparity in interaction with health care providers between HIV-positive and HIV-negative youth, although evidence to support this theory is needed. Selective serotonin uptake inhibitors (SSRIs) are the most common pharmaceutical agents used for moderate to severe depression. The FDA has issued a black box warning of a possible increased

risk of suicide after starting SSRIs, however, careful evaluation of the literature does not show a clear link and should not prevent the use of these medications if needed.^{12,13} Instead, careful monitoring for suicidal ideation should be practiced with all patients with a diagnosis of depression. Practitioners should also be aware of the many drug interactions that can occur between psychotropic medications and certain antiretroviral agents, antibiotics, and antifungals. Studies evaluating the efficacy of behavioral therapy in HIV-infected youth are extremely limited but suggest that group intervention may decrease stress and improve behaviors such as improved medication adherence and safe sex practices.¹¹

Mental illness has been associated with poor medication adherence in adults.⁹ Rudy *et al*, in a cross-sectional observational study, evaluated patient-related factors for medication adherence in HIV-infected youth 12 to 24 years of age. They found no relationship with having a mental health disorder and medication adherence. Poor adherence was associated with low self-efficacy (one's sense of being able to adhere to medications prescribed) and low outcome expectancy (one's sense of benefit from antiretroviral drugs). Greater than 50% nonadherence was seen in HIV-infected youth with low self efficacy/outcome expectancy, structural barriers, and a mental health disorder. These findings were consistent between youth infected perinatally and those infected through high risk behaviors. The only difference found between the two groups was more structural barriers related

to nonadherence in the behaviorally-infected group.^{4,5} It is not clear why a lack of association with poor medication adherence and a diagnosed mental health disorder in HIV-infected youth was not seen in these studies but one explanation may be high rates of treatment for mental health disorders in their study population. Based on the results of these studies, the HIV clinician should address issues of self-efficacy, outcome expectancy, and structural barriers, in addition to treatment of mental disorders in order to maximize antiretroviral treatment adherence.

HIV-infected adolescents have very high rates of mental illness. However, several limiting factors exist in the literature. None of the studies are population-based but instead depend on samples of convenience from clinics in large metropolitan areas. This limitation may be particularly significant for behaviorally-infected youth where at least 50% may not even be diagnosed and in care.¹⁴ Another limitation is that different researchers use different methods of evaluation of mental illness, making comparisons between studies difficult to impossible.

All of the large cross-sectional studies evaluating mental health in HIV-infected adolescents are of populations living in large metropolitan areas. Future research is needed on the mental health care needs and barriers to mental health care for HIV-infected and -affected adolescents residing in rural areas where mental health care resources are scarce. ♦

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Too much information can sometimes overwhelm patients

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timately take action to improve or maintain health status.²

A patient's level of prose literacy may serve as an indicator of his or her health literacy. However, the Institute of Medicine cautioned against relying too heavily on general prose literacy level as a proxy for health literacy level. They warn that many people who have adequate literacy skills in everyday contexts can lack the skills to effectively read and use health information.³ Information from the medical and scientific fields often contains terminology and subject matter that is unfamiliar to the average person. For this reason, even patients with high

literacy skills in everyday situations often prefer to read health information that is presented at a more basic level.

Listed below are some examples of common health-related tasks that require a patient to draw upon his or her health literacy skills:

- Follow the instructions on a medicine label
- Calculate how many days worth of medication he or she has
- Fill-out registration forms
- Give his or her medical history
- Read an appointment slip
- Follow preparation instructions for a procedure
- Give informed consent
- Understand the nature of his or her diagnosis and corresponding treatment.

Consequences of low health literacy

Keeping in mind the tasks that require health literacy, it follows that low health literacy can have serious consequences. Patients who are unable to understand their medication instructions can have poor adherence to treatment. Low health literacy skills can make it very difficult for a patient to navigate the healthcare system, leading to missed appointments or worse, delayed entry into care. Patients with low health literacy are less likely to have a full understanding of their disease or treatment plan, which hinders their ability to give informed consent.⁴

Ultimately, patients lacking adequate health literacy skills

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REFERENCES

1. US Department of Health and Human Services, Centers for Disease Control and Prevention: HIV/AIDS Surveillance Report, 2008, vol 20, Atlanta, GA: Department of Health and Human Services, Centers for Disease Control and Prevention: 2007. Also available at <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>.
2. Chernoff M., Nachman S., Williams P., Brouwers P., Heston J., Hodge J., et al. Mental health treatment patterns in perinatally HIV-infected youth and controls. *Pediatrics* 2009;124:627-36.
3. Williams P. L., Leister E., Chernoff M., Nachman S., Morse E., Di Poale V., Gadow K. D. Substance use and its association with psychiatric symptoms in perinatally HIV-infected and HIV-affected adolescents. *AIDS Behav* 2010;14:1072-82.
4. Rudy B. J., Murphy D. A. Harris R., Muenz L., Ellen J. Prevalence and Interactions of patient-related risks for nonadherence to antiretroviral therapy among perinatally infected youth in the United States. *AIDS Patient Care STDs* 2010;24:97-104.
5. Rudy B. J., Murphy D. A. Harris R., Muenz L., Ellen J. Patient-related risks for nonadherence to

- antiretroviral therapy among HIV-infected youth in the United States: a study of prevalence and interactions. *AIDS Patient Care STDs* 2009;23:185-94.
6. Mellins C.A., Brackis-Cott E., Leu C-S., Elkington K. S., Dolezal C., Wiznia A., et al. Rates and types of psychiatric disorders in perinatally human immunodeficiency virus-infected youth and seroreverters. *J Child Psychol Psychiatry* 2009;50:1131-38.
7. Gaughan D.M., Hughes M.D., Oleske J.M., Malee K., Gore C.A., Nachman S. Psychiatric hospitalizations among children and youths with human immunodeficiency virus infection. *Pediatrics* 2004;113:e544-51.
8. Pao M., Lyon M., D'Angelo L. J., Schuman W. B., Tipnis T., Mrazek D. A., Psychiatric diagnoses in adolescents seropositive for the human immunodeficiency virus. *Arch Pediatr Adolesc Med* 2000;154:240-44.
9. Scharko A M. DSM psychiatric disorders in the context of pediatric HIV/AIDS. *AIDS Care* 2006; 18:441-5.
10. Mellins C. A., Brackis-Cott E., Dolezal C., Leu C. S., Valentin C. Heyer-Bahlburg F. L. Mental health of early adolescents from high-risk neighborhoods: the role of maternal HIV and other contextual, self

- contextual, self-regulation, and family factors. *J Pediatr Psychol* 2008;33:1065-75.
11. Benton TD. Treatment of psychiatric disorders in children and adolescents with HIV/AIDS. *Curr Psychiatry Rep* 2010;12:104-10.
12. Wong IC, Besag FM, Santosh PJ, Murray ML. Use of selective serotonin reuptake inhibitors in children and adolescents. *Drug Saf* 2004;27:991-1000.
13. Dudley M, Goldney R, Hadzi-Pavlovic D. Are adolescents dying by suicide taking SSRI antidepressants: a review of observational studies. *Australas Psychiatry* 2010;18:242-5.
14. American Academy of Pediatrics, Committee on Pediatric AIDS and Committee on Adolescence. Adolescents and human immunodeficiency virus infection: the role of the pediatrician in prevention and intervention. *Pediatrics*. 2001;107:188-90.

April Palmer is Associate Professor, Pediatric Infectious Diseases, University of Mississippi Medical Center, Jackson, and faculty, Delta Region AETC.

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often have poorer health status than patients who are able to effectively use health information. It has been shown that health literacy level is a stronger predictor of health status than education level, income, race/ethnicity, and even age.³

Patients with low health literacy report a lower level of understanding their health conditions and corresponding treatments than people with higher health literacy levels.³ Kalichman and his research group demonstrated this relationship between health literacy level and treatment knowledge specifically in HIV patients.⁶ His group showed that low health literacy is a predictor of poor adherence to highly active antiretroviral therapy (HAART).⁷ As such, HIV patients with low health literacy are more likely to have a detectable viral load and low CD4 count.⁸

Who has low health literacy?

The most recent National Assessment of Adult Literacy (NAAL), conducted by the U.S. Department of Education in 2003, contained a separate survey assessing participants' health literacy skills. Not only does this inclusion emphasize that health literacy is a topic of national importance, it also provides national data on the prevalence of poor health literacy and associated demographic factors. The NAAL report on health literacy found that 14% of the US adult population has below basic health literacy.⁴ People in this category had difficulty completing rudimentary tasks such as locating

information in short texts and performing simple mathematical calculations.⁴

Although 14% may seem like a low prevalence of Americans with below basic health literacy, looking at the numbers based on certain demographic factors can paint a different picture. When the NAAL results were stratified by race/ethnicity, it was found that 41% of Hispanic adults, 25% of Native American adults, and 24% of African American adults have below basic health literacy.⁴ By age, those 65 years and older had the lowest health literacy scores.⁴ Differences in health literacy levels were also seen with respect to health insurance source. Recipients of Medicaid and Medicare had below basic health literacy prevalence of 30% and 27% respectively.⁴ Educational attainment was also found to have an association with health literacy level. 49% of adults with less than high school (or equivalent) education had below basic health literacy, compared to only 3% of adults who completed a four-year college degree or higher.⁴ No state-level health literacy data was available, but prose literacy data shows that residents of Southern states (including Arkansas, Louisiana, and Mississippi) have lower scores than the nation as a whole.³ Given the demographic factors associated with low health literacy, it is conceivable that some HIV treatment programs (particularly those in the public sector) may have prevalence of low health literacy well above the national average.

Clear health communication

An individual's health literacy is influenced by many societal factors, including the educational system and cultural aspects.³ Poor health literacy will not change without intervention both within and outside of the healthcare system. Within the healthcare system, the onus falls on providers to ensure that we communicate clearly with patients. Clear communication and consideration of health literacy level are part of the patient-centered model of care that is becoming a popular approach to medical care.³ All professionals who provide care to HIV-positive clients (doctors, nurses, case-managers, etc.) have the opportunity to improve communication by being aware of the barriers that low health literacy can create.

Even without expertise in the fields of health literacy and health education, care providers can take steps to make medical information more accessible and usable. When explaining information to a patient, it can facilitate understanding to use a variety of teaching methods (written, oral, visual) as preferred learning style varies by individual. Written materials are most effective when they are concise and employ everyday language.²

As experts in the field, healthcare professionals can easily fall into the trap of over-informing a patient. Although some patients may be interested to learn more about a

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Use Ask Me 3 tool to decide what information is essential

Health literacy, from preceding page

subject, many will be overwhelmed by the extra information. Faced with an overabundance of information, patients with poor health literacy skills have difficulty discerning which points are most important and should be acted upon.² To help providers and patients improve communication, the National Patient Safety Foundation developed the *Ask Me 3* tool, which reminds both parties of what information is most essential. *Ask Me 3* consists of the following three questions:

- What is my main problem?
- What do I need to do?
- Why is it important for me to do this?⁹

Patients are encouraged to ask these three questions, and providers are reminded to provide the answers in a way that the patient can understand.

How does a provider know that a patient understands the information given? Patients often do not speak up if they are confused or unsure of what to do. When a provider simply asks if the patient understands, the answer is often “Yes” regardless of whether or not it is true. A better way to get a sense of what the patient has understood is the “teach-back” method in which the client is asked to explain what has

just been explained to him or her. Giving the patient the opportunity to repeat information in his or her own words allows the provider to confirm that he or she has communicated clearly or to try again in cases where the client does not recount the intended message.

Summary

Low health literacy can create significant barriers to effective care and treatment for HIV or any other health condition. Low health literacy is more commonly seen in traditionally marginalized populations: racial/ethnic minorities, the elderly, those with lower educational attainment. Regardless of a patient’s potential for low health literacy, clinicians should strive to make all health communication easily understood and easily acted upon. Care providers have the responsibility to ensure that each patient understands the actions to take in order to achieve his or her desired health outcome.❖

BIBLIOGRAPHY

1. U.S. Department of Health and Human Services. Healthy People 2010. Washington, DC: U.S. Government Printing Office; November, 2000.
2. Doak C, Doak L, Root J. Teaching Patients with Low Literacy Skills. 2nd ed. Philadelphia: J. B. Lippincott Company; 1996.
3. Neilsen-Bohlman L, Panzer A, Kindig D (eds.). Health Literacy: A Prescription to End Confusion. Washington, DC: The National Academies Press; 2004.
4. Kutner M, Greenberg E, Jin Y, Paulsen C. The Health Literacy of America’s Adults: Results from the 2003 National Assessment of Adult Literacy. Washington, DC: U.S. Department of Education; 2006. NCEES 2006-483. National Center for Education Statistics.
5. Williams MV, Davis T, Parker RM. The Role of Health Literacy in Patient-Physician Communication. *Journal of Family Medicine*. 2002; 34(5):383-9.
6. Kalichman SC, Cherry J, Cain D. Nurse-Delivered Antiretroviral Treatment Adherence Intervention for People with Low Literacy Skills and Living with HIV/AIDS. *Journal of the Association of Nurses in AIDS Care*. 2005; 16(5):3-15.
7. Kalichman SC, Ramachandran B, Catz S. Adherence to Combination Antiretroviral Therapies in HIV Patients of Low Health Literacy. *Journal of General Internal Medicine*. 1999; 14(5): 267-273.
8. Kalichman SC, Rompa D. Functional Health Literacy is Associated with Health Status and Health-Related Knowledge in People Living with HIV/AIDS. *Journal of Acquired Immune Deficiency Syndrome*. 2000; 25(4): 337-44.
9. Ask Me 3 [Internet]. Boston: National Patient Safety Foundation; [cited 2011 May 28]. Available from: <http://www.npsf.org/askme3/>.

Daniele Farris is Health Educator at the HIV Outpatient Program (HOP) Clinic of the LSU Interim Public Hospital in New Orleans.

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Peanuts can be important part of diet for HIV-infected patients

Leigh Anne Kamerman
Burns, MS, RD, LDN

Food security and malnutrition continue to be leading problems internationally among individuals living with the HIV virus.

The peanut, an important member of the legume family, may be the most economical and nutrient-dense food available for use in the diet in the treatment and prevention of malnutrition. It can also be a beneficial part of a well-balanced diet as recommended by the 2010 USDA Guidelines.

These guidelines were written to promote health and reduce the risk of chronic diseases, as well as to reduce the prevalence of obesity (USDA 2011). All of these have become concerns for practitioners who care for the many individuals now living longer lives with the HIV virus. One concern regarding the use of peanuts in the diet is the high fat content but studies have consistently shown an association between consumption of nuts and the reduction of coronary heart disease, as well as a lower risk of obesity and weight gain (Sabaté 2009). Peanuts also contain more of the antioxidant resveratrol than is found in grapes. More importantly, the cost per serving is less than 15 cents.* It is important that health care providers understand the value of this simple legume to provide an important food source often needed in HIV/AIDS care when food security is a concern.

Peanuts and peanut butter contain many nutrients and they are commonly used to increase both the protein and the calories required to improve the nutri-

tional status of patients who are underweight or have muscle wasting. Although malnutrition knows no boundaries, many individuals facing both the challenges associated with starvation and an HIV diagnosis reside in the developing world, especially in India and sub-Saharan Africa (Hawn 2007). In some of these countries, a peanut-based product known as Plumpy'nut is making the difference between life and death for HIV-positive infants and young children. Plumpy'nut is non-water-based, easy to store, easy to eat, and an overall ready-to-use therapeutic food that delivers ~500 calories in one 3-ounce packet. If a 22-pound child is fed two packs a day, he/she is projected to gain around 1.5 pounds a week.

Plumpy'nut delivers about the same amount of calories, protein, and fat found in a peanut butter and jelly sandwich and a glass of whole milk, as well as the vitamins and minerals generally found in a multivitamin. One benefit to Plumpy'nut, in comparison to other therapeutic foods such as a powdered milk formula (F-100), is the fact that it can be consumed without mixing with water. This is vital since clean water is a rare commodity in some of these countries.

At this time, Plumpy'Nut is being used to address only one kind of hunger: acute food deprivation. Moreover, it is important to note that presently the focus is only on young children. Plumpy'nut is a so-called "quick fix" for children 6-24 months of age. Due to fear of peanut allergies, the use of peanuts in the US

school system has greatly decreased but peanut allergies are not often found in children in developing countries. It is claimed that the use of Plumpy'nut has transformed many of the infants and children at highest risk for starvation from a skin-and-bones condition to thriving in as little as four to six weeks (Sachs, 2010).

The nutritional value of the peanut has become more important than ever in the fight to prevent malnutrition among both children and adults living with HIV and AIDS. It is important for us as providers to remember the peanut's true value as a food staple that can provide the necessary protein, carbohydrates, healthy fats, and even important antioxidants. The peanut can not only help prevent malnutrition but it can help in the management of other chronic diseases and co-morbidities that are a concern for today's patients who are living longer with the HIV virus. ♦

**Priced at three local groceries in the New Orleans area and averaged.*

REFERENCES

- Hawn, Carleen. (2007). "Nutriset is attacking a huge problem with a surprisingly small product." Retrieved on June 22, 2011 from http://money.cnn.com/2007/01/24/magazines/business2/Prob3_HungerMalnutrition.biz2/index.htm
- USDA Press Release: Dietary Guidelines for Americans, Office of Communications January 31, 2011.
- Sabaté Joan and Jen Ang, Nuts and Health outcomes: New Epidemiology Evidence. *American Journal of Clinical Nutrition*, May 2009 vol. 89 no.5 1643S-1648S
- Sachs, Jeffery. (2010). "Saying Nuts to Hunger" Retrieved on June 22, 2011 from http://www.huffingtonpost.com/jeffrey-sachs/saying-nuts-to-hunger_b_706798.html

Leigh Anne Burns is Instructor of Clinical Medicine/Nutrition, LSUHSC School of Medicine, and Nutritionist, Interim LSU Hospital HIV Outpatient Program (HOP) Clinic.



Arkansas AETC takes aim at Native American health disparities

Derrick Newby, MPA, BS

The phrase “American Indian and Alaska Native” (AI/AN) refers to “people having origins in any of the original peoples of North and South America (to include Central America) and who maintain tribal affiliation or community attachment,” according to the U.S. Census Bureau.² Although HIV has not thus far had the profound effect on Native American communities in the Delta region as experienced by other minority communities, the compounding effect of other challenges warrants a focus on HIV prevention efforts in the community. Native American populations continue to face serious issues related to the prevention of sexually transmitted diseases (STDs), as well as challenges associated with the integration of their culture into the mainstream culture. The limited visibility of community members is an additional challenge.

Although we have not been able to solve all of these problems in Arkansas, we have initiated a dialogue with the Native American community to address the challenges. We have documented unique experiences captured in needs assessments and these are being shared within the region to help reduce the disparities and develop innovative ways to reduce future challenges in Arkansas. The article is intended to serve as a limited guide for opening a dialogue between providers about how they interact with the Native American community and for identifying steps that should be taken to prevent

the spread of HIV in Native American communities.

STDs in Native American communities

In Arkansas, Native Americans make up an estimated 0.8 percent of the population. 52% live in areas considered rural and 48% live in areas considered urban. National STD rates among American Indians are two to six times higher than rates for whites.¹ In some states with American Indian populations over 20,000, gonorrhea and syphilis rates are twice as high as among other ethnic groups. These facts are important because the presence of other sexually transmitted diseases that compromise the mucosal membrane increase a person’s vulnerability to an HIV infection if exposed to the virus. They are also indicative of unsafe sexual practices. STDs can make it easier for an individual to receive the HIV virus and transmit it to another person through sex.⁴

It is also important to note that American Indians are often misclassified in race/ethnicity STD data. Therefore, one should be skeptical in reviewing local data related to these communities. Misclassification increases when there are lower percentages of American Indians overall in a community. This misidentification or misclassification in reporting dilutes the challenges that Native Americans are facing related to STDs, an important but little publicized health problem affecting this population.⁵ These infections not only contribute to sizable morbidity and health care expenditures,

but they also may lead to serious sequelae.⁵

In order to prevent an increase of HIV infections, it is important to properly classify new infections and accurately track HIV and STDs in Native American communities and it is increasingly important to identify and treat infected members of these communities. Primary care providers should be aware of the increased risk for STDs among Native Americans and other minority groups so that timely diagnosis, treatment, and case reporting can occur.⁶

The Delta Region AIDS Education and Training Center in Arkansas is working to help improve state STD monitoring and surveillance. Improvements include an increase in accuracy and complete case reporting by race and ethnicity to help identify special communities in need of targeted STD prevention and education activities. These types of improved measures of surveillance can serve as an important tool to evaluate STD/HIV prevention programs in Native American communities. This integrated approach to STD control is needed to help reduce the burden of STDs and their consequences among American Indians.⁶

Identifying cultural aspects related to HIV prevention

The role of culture is often an overlooked component of effective HIV and STD prevention, intervention, and care. Culture can be defined in a number of ways, but generally it is the sum of attitudes, behaviors, customs, and beliefs of a people, including



thoughts, styles of communication, ways of interacting, and views of roles and relationships.³ When culture is overlooked in relation to Native Americans, we have learned that a gap in care may be created. Some Native Americans we encountered during our statewide needs assessment reported seeking care outside of Arkansas regardless of the availability of local care. They reported feeling more comfortable accessing care at Native American health service sites located in Oklahoma. Those who identify themselves as Native Americans often do not feel connected to the current health care system and do not believe their cultural needs are being met by non-Native American providers.⁷

At a 2011 conference in Arkansas, Lee “Standing Bear” Moore, a spiritual healer, addressed a group of health care providers and discussed traditional healing versus pharmaceutical treatment as related to HIV. Traditional Indian medicine has been a part of Native American health and well-being for hundreds of years. For centuries, Native American people have looked to their tribal healers to prevent or cure physical, mental, and spiritual ailments through the use of a complex pharmacology and/or ceremony. For many Native Americans, reliance on traditional healers and medicine continues amid modern technological advances in Western medicine.⁸ Standing Bear emphasized that the practice of traditional healing continues to play an important role in the health status of modern Native Americans. This may need to be a topic of discussion between Native American patients and their

primary care providers in order to develop strategies for improving health outcomes. If patients are supplementing the treatment recommendations of their health care providers with recommendations from their spiritual healers, the expected outcomes of both providers could be affected. Serious drug interactions between herbal remedies and antiretrovirals, leading to serious adverse effects or drug resistance, could be an issue. An open and accepting attitude by traditional health providers would make it more likely American Indian patients would share information about their use of native medicines. Both types of providers may need to work together for the best outcome.

Addressing identified needs of hidden populations

Even though the number of reportable HIV cases in Native Americans is small (less than 1%) compared to other populations affected by HIV/AIDS, the Native American population is also small in comparison to the total population.

Through our continued relationship building with the Native American community in Arkansas, progress has been made and training opportunities created by partnering with groups across the state, both in the public and private sector. Our search for this hidden population has led us to vital gatekeepers to whom we now send educational material related to health care. At the request of the elders, most of the information we provide is targeted towards the youth. While an early study revealed that the HIV/AIDS rate per 100,000 population among American

Indian/Alaska Native youth was greater than whites and Asian/Pacific Islanders, at this time these numbers have somewhat stabilized.⁹ AI/AN males showed significant increases in diagnosis rates from 2003 to 2006. In addition, the study showed that the survival of youth 36 months after AIDS diagnosis was lower for AI/AN youth compared with white youth. While that study was based on 2006 data, this was an important finding that laid the foundation for evaluating youth survival across the region. The study further revealed that in the United States, both racial and ethnic minorities suffer disproportionately from HIV/AIDS. Earlier reports and our current findings suggest that to be effective in service provision, it is important to monitor the epidemic and identify the needs of Native American communities to further understand the behaviors of those infected and those who fit the profile for “high risk.”

Communicating and partnering

The CDC maintains records of seven racial and ethnic groups: American Indian/Alaska Native, Asian, Black/African American; Hispanic/Latino, Native Hawaiian/Other Pacific Islander, White, and Multiple Races (see Figure 1.1). It will become increasingly important for providers to access this information and contribute to the data by identifying patients from the Native American community and accurately reporting STDs and HIV infections. The Indian Health Care Improvement Act (IHCIA) was implemented in 1976 with the purpose of improving the health status of Native American

See *Native Americans*, next page



Native Americans can feel disconnected from health system

Native Americans, from preceding page

cans. Recognizing the unique trust relationship between the Federal government and Indian tribes as established through treaties for ceded lands, agreements, legislation, and case law, Congress created the IHCA to provide appropriations for health services and facilities for Native American people. The health services established through the IHCA are based on a modern Western model of medicine and health care.⁸ It may be the right time to partner with Indian Health Services to create a new model of care based upon cultural awareness.

Conclusion

Developing a new model of care will allow providers to integrate native medicine and Western medicine. Traditional behaviors used by individuals to protect, maintain, or promote their health status are an intricate part of their cultural identity. Understanding these aspects has helped us build a dialogue with our Native American community. We intend to use this dialogue as a tool to address health disparities and to suggest that the same opportunities are possible among health care providers and their Native American patients to address issues like HIV. Our experiences with this approach provide evidence that the model can help prevent an increased prevalence of HIV within Native American communities.

Providers should openly seek to understand the culture of their Native American patients and research the epidemiology related

to STDs in their communities in an effort to reduce health disparities. It will be a challenge because addressing the attitude of a portion of the population toward any given proposition, based upon a measurable amount of factual evidence and involving some degree of reflection, analysis, and reasoning is a challenge. Yet we must not allow history to repeat itself in the Native American population when we can address the problem now. ❖

REFERENCES

1. STDs in American Indians and Alaska Natives in ARKANSAS. Retrieved from http://www.ncsddc.org/upload/wysiwyg/documents/Fact_Sheets/ARKANSAS.pdf
2. Retrieved from <http://www.ahrq.gov/research/iom-racereport/reldata1tab1-1.htm>
3. HIV/STD Prevention Guidelines for Native American Communities: American Indians, Alaska Natives, & Na-

4. tive Hawaiians. Anno Nakai, Dennis Manuelito, Wesley K. Thomas, William L. Yarber, Robin R. Milhausen, James G. Anderson, and Irene Vernon. Published 2004. <http://www.indiana.edu/~aids/booklet.pdf>
5. Prevention for Positives: HIV & STD Transmission Issues or, "What About Diseases That Are Spread By Having Sex?" Retrieved June 6, 2011 from <http://www.hivinfo.us/preventionforpositives.html>
6. Westrom, L.: Incidence, prevalence, and trends of acute pelvic inflammatory disease and its consequences in industrialized countries. *Am J Obstet Gynecol* 138: 880-892 (1980)
7. Sexually Transmitted Diseases and Native Americans: Trends in Reported Gonorrhea and Syphilis Morbidity, 1984-88 Kathleen E. Toomey, MD, MPH, Alisa G. Oberschelp, BS, Joel R. Greenspan, MD, MPH. Retrieved <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1580156/pdf/pubhealthrep00200-0046.pdf>
8. Native American health left out in the cold. *Devi S. Lancet*. 2011 Apr 30;377(9776):1481-2.
9. Holly T. Kuschell-Haworth. Jumping Through Hoops: Traditional Healers and the Indian Health Care Improvement Act. *Summer, 1999 2 DePaul J. Health Care L*. 843.
10. Johnson, A., Hu, X., Sharpe, T., Dean, H. 2009. Disparities in hiv/aids diagnosis among racial and ethnic minority youth. *The Journal of Equity in Health*. 2. 1. 4-18.
11. Retrieved from <http://www.cdc.gov/hiv/topics/surveillance/basic.htm#aidsrace>

Derrick Newby is Coordinator of the Delta Region AETC in Arkansas.

Figure 1:
In 2009, the estimated number of AIDS diagnoses in the 50 states and the District of Columbia, by race or ethnicity, was as follows:¹⁰

Race or Ethnicity	Estimated # of AIDS Diagnoses, 2009	Cumulative Estimated # of AIDS Diagnoses Through 2009*
American Indian/ Alaska Native	155	3,700
Asian ^a	429	8,324
Black/African American	16,741	466,351
Hispanic/Latino ^b	6,719	190,263
Native Hawaiian/ Other Pacific Islander	50	839
White	9,467	426,102
Multiple Races	686	12,726

* From the beginning of the epidemic through 2009. ^aIncludes Asian/Pacific Islander legacy cases. ^bHispanics/Latinos can be of any race.



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▲ **Quantification of lean tissue losses during cancer and HIV infection/AIDS.** Thibault R, Cano N, Pichard C. *Curr Opin Nutr Metab Care.* 2011 Mar 16.

▲ **Vitamin D deficiency in HIV-infected patients: associated with non-nucleoside reverse transcriptase inhibitor or efavirenz use?** Pasquet A, Viget N, Ajana F, de la Tribonniere X, Dubus S, Paccou J, Legroux-Gérot I, Melliez H, Cortet B, Yazdanpanah Y. *AIDS.* 2011 Mar 27;25(6):873-4.

▲ **Antiretroviral treatment interruption leads to progression of liver fibrosis in HIV-hepatitis C virus co-infection.** Thorpe J, Saeed S, Moodie EE, Klein MB; for the Canadian Co-infection Cohort Study (CTN22). *AIDS.* 2011 Feb 16.

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▲ **HIV-associated nephropathy: experimental models.** Avila-Casado C, Fortoul TI, Chugh SS. *Contrib Nephrol.* 2011;169:270-85.

▲ **Stamping out stigma in HIV.** Lewis R. *Nurs Times.* 2011 Mar 22-28;107(11):16-7

▲ **Vitamin A supplementation for reducing the risk of mother-to-child transmission of HIV infection.**

Wiysonge CS, Shey M, Kongnyuy EJ, Sterne JA, Brocklehurst P. *Cochrane Database Syst Rev.* 2011 Jan 19;(1):CD003648.

▲ **Knowledge about HIV in People with Schizophrenia: A General Population Comparison.** De Hert M, Trappeniers L, Wampers M, Van Damme P, Van Hal G, Peuskens J. *Clin Schizophr Relat Psychoses.* 2011 Jul;5(2):80-6

▲ **Comparison of abacavir/lamivudine and tenofovir/emtricitabine among treatment-naïve HIV-infected patients initiating therapy.** Tan DH, Chan K, Raboud J, Cooper C, Montaner JS, Walmsley S, Hogg RS, Klein MB, Machouf N, Rourke S, Tsoukas C, Loutfy MR, The Canoc Collaboration. *J Acquir Immune Defic Syndr.* 2011 Jun 24

▲ **Acupuncture and the relaxation response for treating gastrointestinal symptoms in HIV patients on highly active antiretroviral therapy.** Chang BH, Sommers E. *Acupunct Med.* 2011 Jun 24.

▲ **An Intervention to Help Community-Based Organizations Implement an Evidence-Based HIV Prevention Intervention: The Mpowerment Project Technology Exchange System.** Kegeles SM, Rebchook G, Pollack L, Huebner D, Tebbetts S, Hamiga J, Sweeney D, Zovod B. *Am J Community Psychol.* 2011 Jun 21

▲ **Substance abuse treatment utilization among adults living with HIV/AIDS and alcohol or drug problems.** Orwat J, Saitz R, Tompkins CP, Cheng DM, Dentato MP, Samet JH. *J Subst Abuse Treat.* 2011 Jun 21.

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