



THE IHS PRIMARY CARE PROVIDER

A journal for health professionals working with American Indians and Alaska Natives



November 2011

Volume 36 Number 11

Assessment of Prenatal Hepatitis B Surface Antigen Screening at Indian Health Service Facilities in Arizona

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Abstract

Using the Indian Health Service (IHS) electronic medical record system, we conducted a retrospective cohort study to evaluate prenatal hepatitis B surface antigen (HBsAg) screening completeness and prevalence among American Indian women at three Arizona Indian Health Service facilities during 2005. The prenatal HBsAg screening rate was 99%; of 1,017 women screened during 2005, none (0%) were HBsAg-positive.

Introduction

During 2005, an estimated 24,000 births occurred among women in the US with chronic hepatitis B virus (HBV) infection, with a risk for perinatal infection among their infants as high as 90%. Approximately 85% - 95% of perinatal HBV

transmission can be avoided through routine prenatal hepatitis B surface antigen (HBsAg) screening, universal vaccination of infants, and postexposure prophylaxis of infants born to HBsAg-positive women,¹ as recommended by the Advisory Committee on Immunization Practices (ACIP).² In Arizona the standard practice among health care provider is to follow ACIP recommendations to prevent perinatal HBV infection. Health care providers and laboratories are required to report all HBsAg-positive results, including those from prenatal screening within five working days to the Arizona Department of Health Services (ADHS). The Indian Health Service (IHS),

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the federal agency responsible for health care for eligible American Indian and Alaska Native (AI/AN) populations, also follows ACIP recommendations and voluntarily participates in reporting HBV infections to ADHS.

During 2005, a total of 6,293 AI/AN births were recorded by ADHS. Of those, 2,458 (39.1%) occurred at eight IHS facilities. The national HBsAg prevalence estimate for the Asian/Pacific Islander (PI)/AI/AN group is 0.005 (National Health and Nutrition Examination Survey, NHANES III).³ Applying this estimate to AI/AN births results in an expected 31 births to HBsAg-positive AI/AN women in Arizona for 2005. However, only three AI/AN women were reported to ADHS as positive for prenatal HBsAg during the same period. The difference between expected and reported cases led to concern regarding possible underreporting of prenatal HBsAg-positive screening results among AI/AN women. We conducted a retrospective cohort study in three of the eight IHS birthing facilities in Arizona to evaluate completeness of prenatal HBsAg screening, and to calculate prenatal HBsAg prevalence among AI/AN women at these facilities during 2005.

Methods

We identified three IHS facilities for this study and extracted data from each site's Resource and Patient Management System (RPMS), an electronic clinical and administrative data software program developed by the IHS. We performed manual medical record reviews when information was unavailable in RPMS. A case was defined as a positive prenatal HBsAg screening result in an AI/AN woman who delivered at one of the three selected IHS facilities during January 1 - December 31, 2005. For infants, we consulted RPMS or medical records to confirm administration of hepatitis B vaccine within 12 hours of birth when information regarding maternal HBsAg screening was incomplete or unavailable. We calculated screening completeness at IHS facilities by dividing the total number of women with prenatal hepatitis B screening by the total number of women who delivered during the study period.

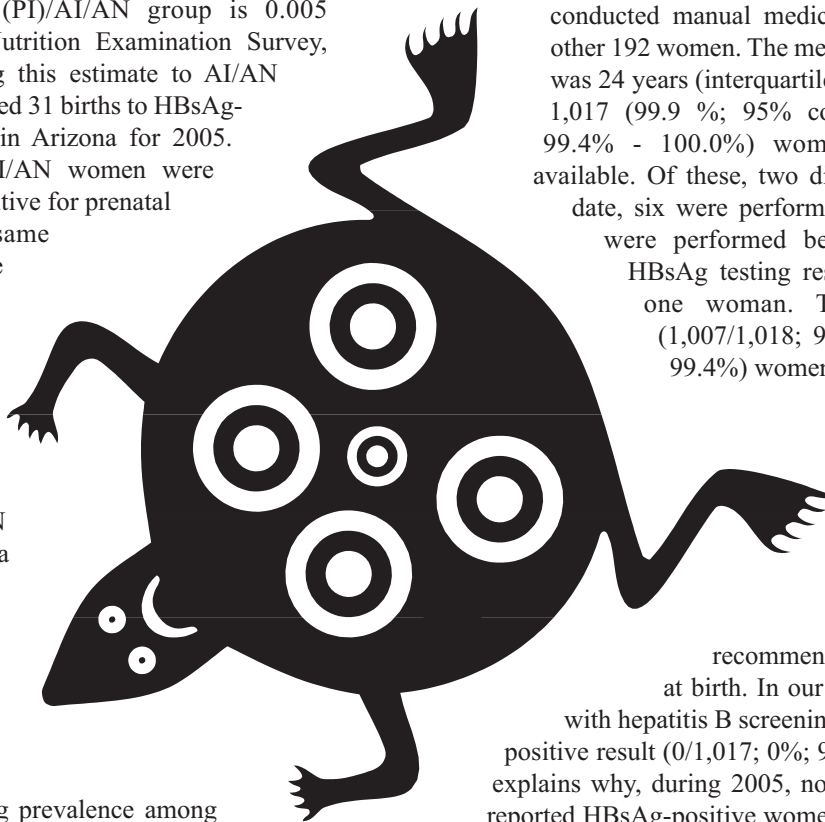
Results

In 2005, a total of 1,018 women delivered at the selected IHS facilities, which represented 16.2% (1,018/6,293) of births from AI/AN women throughout Arizona and 41.4% (1,018/2,458) of births at Arizona IHS facilities. Information on prenatal HBsAg screening was available in RPMS for 81.1% (826/1,018) of women. We conducted manual medical record reviews for the other 192 women. The median age at time of delivery was 24 years (interquartile range = 20 - 28). Overall, 1,017 (99.9 %; 95% confidence interval [CI] = 99.4% - 100.0%) women had an HBsAg test available. Of these, two did not have a documented date, six were performed after delivery, and two were performed before pregnancy. Prenatal HBsAg testing results were unavailable for one woman. Thus, a total of 1,007 (1,007/1,018; 98.9%; 95% CI = 98.0% - 99.4%) women were adequately screened for HBsAg during their pregnancy. All newborns from women with inadequate hepatitis B screening (10) or with no available screening result (1) received recommended hepatitis B vaccination at birth. In our study, none of the women with hepatitis B screening available had an HBsAg-positive result (0/1,017; 0%; 95% CI = 0% - 0.4%). This explains why, during 2005, none of these three facilities reported HBsAg-positive women to ADHS.

Discussion

Data extracted from RPMS and medical records indicate that the rate of prenatal HBsAg screening at the IHS birthing facilities studied was high and in the range of (or higher than) rates documented in previous reports.^{4,5,6} All women with a correctly administered prenatal screening were HBsAg-negative. Additionally, all perinatal management of infants born to mothers with unknown HBsAg status was according to ACIP recommendations.

The Asian/PI/AI/AN group ("other") in NHANES III combines population groups with different HBV infection prevalences. Although data regarding HBsAg prevalence among AI populations are limited, Asians and PIs are well-recognized groups at high risk for HBV infections.^{7,8} In addition, the AN population has been previously documented to have higher risk for HBV infection than AI populations residing in the contiguous 48 states.^{9,10} Using HBsAg prevalence from the NHANES III "other" group is probably inaccurate when applied to a single subpopulation (e.g., AIs),



because NHANES has not been designed to provide estimates for groups other than blacks, whites, and Hispanics. The true HBsAg prevalence for AI populations might be less similar to the relatively higher prevalence among blacks and other race/ethnicities than to the lower prevalence among whites. Therefore, applying the HBsAg prevalence estimates available through NHANES III for AI populations might lead to an inflated number of expected cases.

The findings in this report are subject to at least two limitations. First, this report describes maternal HBsAg screening at IHS facilities. The population included in our investigation, which represents <20% of AI/AN women who delivered infants in Arizona during 2005, might differ from AI/AN women who did not deliver at IHS facilities. Second, we reviewed AI/AN births at a subset of IHS facilities in only one state, Arizona. Maternal HBsAg prevalence might vary by region or tribe, and our findings might not apply to other AI populations.

RPMS was a useful resource to rapidly assess if prenatal HBsAg screening was complete and to calculate prenatal HBsAg prevalence. Because of the need to accurately assess perinatal hepatitis B transmission prevention practices among AI/AN populations, this method might be useful for evaluating the prenatal HBsAg screening, infant vaccination, and postexposure prophylaxis of infants born to HBsAg-positive women at other IHS or tribal facilities.

Acknowledgements

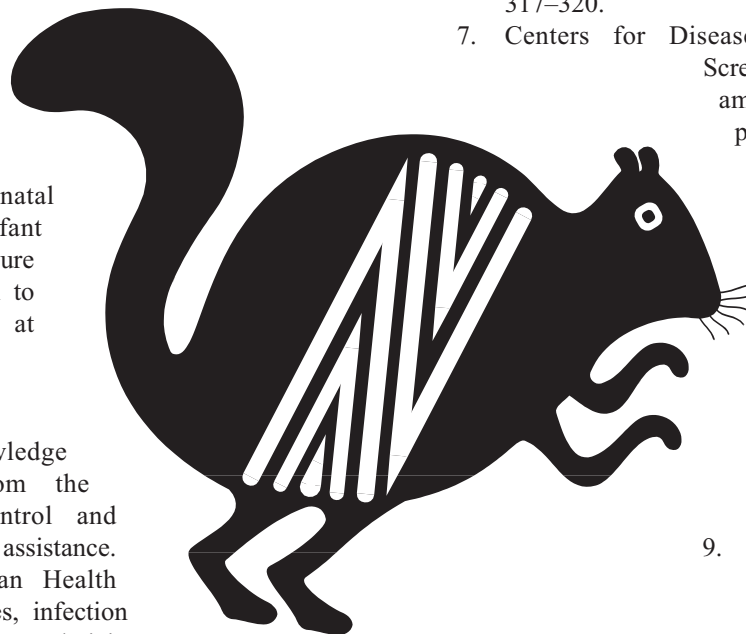
We gratefully acknowledge Lisa Jacques-Carroll from the Centers for Disease Control and Prevention for her technical assistance. Also, we thank all Indian Health Service public health nurses, infection control nurses and laboratory technicians who assisted this investigation.

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Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Indian Health Service or the Centers for Disease Control and Prevention.

HIV Screening in the Native American Population: Risk Factors, Barriers, and Cost-Effectiveness Considerations

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Abstract

The Department of Health and Human Services estimates close to 60,000 cases of newly acquired HIV each year. While the current rate of HIV acquisition is encouraging, rates are actually increasing for some minority groups, including American Indian and Alaska Natives (AI/AN), Asians, and African Americans.

In 2006, the CDC published revised guidelines for HIV screening that support HIV screening tests for all individuals. This new recommendation was made in view of evidence that routine testing is more likely to identify new cases of HIV infection than testing programs based on risk behaviors. This article reviews HIV screening in the AI/AN population, the risk factors that put this population at risk, the barriers for screening, and the cost effective implications of suboptimal screening. Providers need to be educated about patient and provider barriers that exist and encouraged to implement the recommended routine screening protocol per the CDC. A screening program based on the CDC recommendations, but tailored to the needs of AI/AN, would benefit this population.

Introduction

The Centers for Disease Control and Prevention (CDC) estimates that over one million Americans are living with human immunodeficiency virus (HIV), and 18,000 Americans with acquired immunodeficiency syndrome (AIDS) will die each year.^{1,2} Direct medical costs are estimated to be more than \$380,000 per person infected with HIV.³ The US federal government spent 12.3 billion dollars on HIV alone in 2009.⁴ While there has been a substantial decrease in new AIDS cases reported each year, the number of Americans living with HIV has steadily increased since the first case was identified 1981.⁵ The Department of Health and Human Services estimates close to 60,000 cases of newly acquired HIV each year. Fortunately,

this acquisition rate is much lower than the peak diagnosis rates of 130,000 new cases per year seen in the 1980s.⁴ While the current rate of HIV acquisition is encouraging, rates are actually increasing for some minority groups, including American Indian and Alaska Natives (AI/AN), Asians, and African Americans.^{6,7}

Underestimation of HIV Rates in AI/AN

The AI/AN population represents the third highest rate of HIV-positive persons in America, even though AI/AN account for only 1.5% of the total population.^{1,2} The rates of HIV infection in AI/AN have increased from 10.3% in 2005 to 11.9% in 2008.⁶ The estimated rate of HIV in AI/AN men is 23.4 (per 100,000) compared to 16.6 for white men, and 6.9 for AI/AN women versus 2.9 for white women. American Indians are also disproportionately affected by HIV/AIDS and are 1.6 times as likely to have AIDS than whites.⁷ The rates of HIV infection are also higher in AI/AN children (0.3 per 100,000 AI/AN versus 0.1 white).⁸ An HIV surveillance report, issued in 2008 by the CDC, stated the HIV rate in AI/AN boys and men older than 13 years of age is 18.4, and the rate of death of AI/AN with HIV infection to be 3.8 cases per 100,000 persons.⁶

The HIV rates reported by the CDC are likely an underestimation because AI/AN are often misclassified in national surveillance and reporting programs. A 30% misidentification rate of AI/AN was found in one study, where participants were classified improperly as white, Hispanic, black, or Pacific Islander.⁹ Burhansstipanov et al conducted a study that illustrated an underestimation of 38% in HIV reporting on the AI/AN population across the nation.¹⁰ In addition, AI/AN are often classified in surveillance information, along with other minority groups, in the category labeled as "other," further reducing the identification of the true number of AI/AN cases.¹¹ Further complicating this problem of inaccurate surveillance information is the fact that not all 50 US states are compliant with the national requirements for reporting newly diagnosed cases of HIV/AIDS.¹² This is a substantial health care issue for states with a large AI/AN population. In addition, health care facilities serving AI/AN that are not part of Indian Health Service (IHS) are not held to the same reporting standards that

are set forth by the government, because of tribal sovereignty. These facilities may choose to not report their newly diagnosed sexually transmitted disease cases.¹² Campsmith et al estimated that almost 26% of AI/AN living with HIV are undiagnosed.¹³ This significant underestimation of the prevalence of HIV in AI/AN leads to under-screening, misperception of overall HIV risk, inadequate allocation of resources, and reduced mobilization of public health care programs.^{9,14}

HIV Risk Factors

Factors that place individuals at high risk for HIV infection are well known and are based on the mode of transmission. Persons at highest risk are men who have sex with men (MSM); men and women who have unprotected sex with multiple partners; past or present injection drug use; men and women who exchange sex for money or drugs, or have sexual partners who do; persons whose past or present sexual partners were infected with HIV, were bisexual, or were injection drug users; persons being treated for sexually transmitted disease (STDs); and persons with a history of blood transfusions between 1978 and 1985.^{1,15} Other behaviors that lower a person's inhibition, such as alcohol and drug use, also place an individual at risk for sexually transmitted diseases.¹⁶ Individuals who lack awareness of the prevalence and severity of HIV are at an increased risk because they may be less likely to practice safe sex and may have more sexual partners.¹⁶ Finally, a person with primary HIV will have a higher viral load and be more likely to transmit the virus to their partner.¹⁷ MSM alone account for 53% of new HIV infections. Racial and ethnic minorities accounted for almost 71% of newly diagnosed cases of HIV and AIDS.¹⁶⁻²⁰

Factors that Place AI/AN at Higher HIV Risk Than the General Population

Specific social, behavioral, and physical factors that increase the risk for contracting HIV and other sexually transmitted diseases need to be considered for the AI/AN population. These factors include higher prevalence of alcohol and drug use compared to the general population, complex sexual networks, cultural views on health and sexual activity, and high prevalence of trauma and poverty.

It is well established that the use of drugs and alcohol decreases inhibitions and increases high-risk sexual behavior.^{14,21,22} An estimated 23.8% of AI/AN are current moderate to heavy drinkers, and 21.8% are former drinkers.²³ In 2005, a survey found that AI/AN had the highest rate of illicit drug use compared to persons of other ethnicities.⁶ Several studies have been conducted to examine the prevalence of risky sexual behavior among urban AI/AN related to alcohol and illicit drug use. One study reports that 160 of the 222 subjects were either HIV positive or engaged in high risk behavior within the last year including injection drug use, body piercings, vaginal or anal sexual intercourse with two or more sexual partners, trading money or drugs for sex, or drinking six or more alcohol

containing beverages in one day.¹⁴ Simoni et al reported rates as high as 91% of urban AI/AN having involvement in HIV high-risk behavior consisting of multiple episodes of sexual activity in the last year, alcohol consumption, injection of illicit drugs, or sexual assault.²⁴ Another study showed that 63% of urban AI/AN reported high-risk sexual activity in the past six months. Of these subjects, 73% claimed to have engaged in vaginal or anal sex without a condom with at least one partner. Fifty-two percent reported using condoms none of the time during vaginal or anal sex.²⁵ This study also found that over 40% of subjects claimed to have experienced lifetime trauma related to domestic, physical, or sexual violence.²⁵ Violent crimes, such as sexual assault, increase a person's risk of HIV transmission and may cause post-traumatic stress disorder.¹¹

The disproportionate rate of poverty and unemployment in the AI/AN communities compared to the general US population may also place AI/AN at higher risk for developing HIV.¹¹ Approximately 24% of AI/AN are considered to be poor or living at or below the poverty line; this is a higher prevalence than black, Asian, Hispanic, or white adults.²³ Finally, many AI/AN migrate regularly to and from reservations or urban areas, further increasing the risk of transmission of HIV.^{8,26}

Increase Rate of Progression to AIDS

American Indians and Alaska Natives not only have an increased risk for contraction of HIV, but they are also at risk for having a higher rate of HIV progression to AIDS. A delay in recognizing HIV infection, resulting in a postponing antiretroviral treatment, can increase the rate of developing AIDS. Risk factors for progression of disease include incarceration within the last 12 months, a household income of less than \$1,000 per month, alcohol abuse, and the use of traditional tribal medicines.²⁷

CDC HIV Screening Recommendation and Rationale

Branson et al found that early diagnosis of HIV infections improves health outcomes, reduces mortality in patients with HIV, and possibly delays progression to AIDS, which is often associated with costly conditions.⁵ In addition, transmission rates are estimated to be over three times higher among patients who are unaware of their infection. Therefore, screening for HIV is of high importance. HIV testing in acute care settings is often referred to confidential sites in the community because of lack of follow-up, lack of counseling, and belief that the process was too time consuming.⁵ Unfortunately, these referrals have a very poor compliance rate. Hospitals that have instituted routine screening have found that the percentage of patients that test positive is higher than the rates observed at HIV testing sites. Although this is a cause for concern, HIV infections were identified earlier than they might have been otherwise. This further substantiates the idea that testing based on risk often fails to identify a significant number of persons with HIV.

In 2006, the CDC published revised guidelines for HIV screening. Because the demographics of HIV have changed to include an increasing proportion of heterosexual men and women, minorities, adolescents, and individuals residing outside metropolitan areas, the effectiveness of using risk-based testing to identify HIV-positive persons is reduced. The new recommendations include screening patients in all health care settings after the patient is notified that testing will be performed, unless the patient opts out. Additionally, screenings are recommended annually for persons at high risk and for all pregnant women as part of routine test panels, to be repeated in the third trimester in certain areas where there are increased rates of HIV among pregnant women.⁵ These recommendations aim to detect HIV infection earlier, identify and counsel patients with undiagnosed HIV, link infected individuals to appropriate clinical services, and decrease perinatal transmission of HIV.⁵ There are several justifications to support HIV screening including the detection of HIV before symptoms occur with accurate, inexpensive tests. If treatment is started early, patients may lengthen their life span by preventing the development of symptoms. Transmission rates are also lower among patients who are aware of their positive HIV status. Finally, because the cost of AIDS treatment is expensive, relative costs related to HIV screening are low.⁵ Routine HIV screening is further justified in comparison to methods which target subjects based on risk behaviors, as many patients misperceive their HIV risk or fail to accurately report their HIV status. More patients are likely to consent to HIV screening if the test is offered to everyone without the necessity of personal behavior disclosure.⁵

Patient Barriers to Receiving HIV Screening

Many barriers exist between AI/AN and HIV screening, which may contribute to low routine screening in this population.¹² Although some reports claim that 43% of AI/AN have been tested for HIV, this may be an overestimation due to misidentification as discussed previously.²³ Historically, AI/AN are wary of governmental involvement, which includes medical testing and interventions.²¹ The AI/AN population is composed of hundreds of tribes, each with unique cultures and beliefs. Current programs focus on providing care in a standardized manner based on guidelines, whereas it would be difficult to incorporate individual programs based on specific

tribal beliefs. In addition, negative relations between AI/AN and the US government as a result of broken treaties, lost land, urban relocation, and ongoing racial discrimination have resulted in complex issues including mistrust of the government.^{11,26} For these reasons, AI/AN may be less likely to engage in health care activities such as HIV screening provided by the government.

Other barriers include access to health care in rural areas, especially for the 40% of AI/AN living on reservations or tribal areas.^{11,12,27} Poverty rates among the AI/ANs are twice the national average. Socioeconomic factors add to the epidemiologic risk for HIV infection in the AI/AN population.²⁸ AI/AN reservation community leaders have other concerns that in most cases take precedence over HIV prevention and treatment. These concerns may include diabetes, alcoholism, unemployment, and poverty.¹¹

Confidentiality is a major concern for patients who have access to health care within reservations or even in AI/AN clinics in urban areas. AI/AN communities are small and relatively close-knit, and it is likely that one would encounter a family member, friend, or acquaintance if they sought health care at an AI/AN health clinic.²⁶

Fear of positive HIV status being known by a member of their community and possible spread of rumors pose a huge barrier for screening patients.²⁷ This may explain why one study found that the majority of AI/AN sought HIV screening in non-Native American health care facilities.¹⁴ This barrier may be most profound for homosexual men, the group at highest risk for HIV, as they may worry about further discrimination and exile from their community if their HIV status was found to be

positive.¹¹

Another cultural factor is that AI/AN are modest people and do not feel comfortable talking about their bodies and, in particular, their sexual activities. As such, patients may not notice or report signs or symptoms of HIV/AIDS to their physicians.²⁶ If a patient does consider seeking medical attention or screening, only 28% of AI/AN have private health insurance through an employer.²⁹ Fifty-five percent of AI/AN depend on IHS for health care services.²⁹ Due to the mistrust of governmental agencies, some patients may not fully disclose information about their sexual activity and symptoms. Furthermore, many AI/AN have misperceptions about their own risk level for contracting HIV and their need for screening. Almost half, 44%, of urban AI/AN who engaged in high-risk behavior deemed themselves to be at no or low risk for HIV. A direct correlation was found between likelihood of



having been tested within one year and perceived HIV risk.¹⁴ Therefore, educating AI/AN may improve perceptions of HIV risk and increase screening rates.

Provider Barriers for Administering or Recommending HIV Screening

Risk factors exist beyond those directly associated with patients and their choices. Allocation of resources by governmental agencies is an external barrier to screening. Henslin et al found that AI/AN populations were less likely to have access to an infectious disease specialist.³⁰ In addition, some medical professionals feel uncomfortable inquiring about sexual activity or other HIV risk factors. Many clinicians may not suspect or identify certain patients for being at high risk for HIV infection due to lack of general knowledge. Considering pregnant women alone, barriers to screening include language barriers, health care providers' misperception of patients' risk levels, lack of time, and governmental regulations calling for informed consent and counseling.⁵

Cost-Effectiveness of HIV Screening Programs

Cost-effectiveness for HIV screening is explained by many factors, including the effectiveness and accuracy of available tests and the availability of effective treatments for HIV patients upon diagnosis.³¹ Early HIV identification and treatment may reduce the transmission of HIV by decreasing high-risk behavior and by decreasing the viral load during therapy, both identified to be risk factors in the acquisition of HIV.^{19,32} Prompt treatment allows for control of viral load, delay of AIDS, and possibly prevention of opportunistic infections, which correlate to overall cost-effectiveness.^{31,32} Screening may be more important and possibly more cost-effective for AI/AN because they progress faster to AIDS after HIV diagnosis than any other American ethnic group. As many as 48% of AI/AN with HIV may progress to AIDS within 12 months of HIV diagnosis.¹²

While it may seem burdensome and costly to implement screening programs for this population, studies have validated the cost-effectiveness of screening programs even in areas of low HIV prevalence. Walensky et al simulated the cost effectiveness of an undiagnosed inpatient HIV population and found that even with anticipated prevalence rates as low as 1%, life expectancy increased by 6.13 years/1000 patients.³¹ In addition, the cost associated with each additional quality adjusted life year gained (QALY) was \$35,400. Similar results were seen in other cost-effectiveness research on screening for undetected HIV patients.^{19,33} When prevalence rates were as low as 0.1%, the cost associated with each additional QALY increased to \$64,500.³¹ The authors of past research concluded that it is cost effective to screen for undetected HIV even with very low prevalence rates, as similar estimates for other chronic disease states such as diabetes, hypertension, and colon cancer are much higher (range \$57,700/QALY to \$80,400/QALY).³¹ There is a significant survival advantage associated

with earlier diagnosis before severe immunocompromise occurs to the patient, and an additional benefit to public health due to reduced transmission.

It is important to recognize that the input parameters in these HIV screening cost-effectiveness models include only the cost of screening. Specific screening components included cost of the test itself, test uptake rates, frequency of testing, negative test rates, pre- and post-test counseling, specificity and sensitivity of tests, monthly antiretroviral costs, and initial viral loads.^{19,31,33}

We expect rates of HIV in AI/AN to be high, upwards of 12% in some subpopulations.⁷ Because of these high rates, it seems clear that from an economic perspective, it would be very beneficial to develop and implement screening programs based on the CDC recommendations. However, one has to consider the additional resources and costs associated with identifying, tracking, and persuading AI/AN to be tested, given the cultural, physical, and socioeconomic barriers that are prevalent in this population. Many AI/AN reside on reservations where they have limited or no access to primary care. Greater success in HIV screening rates may be achieved with the urban AI/AN population. This urban population, however, represents only a small percentage of the total AI/AN population. It is essential to consider the importance of follow-up and access to care as well as education on prevention. Screening without follow-up confers no benefit to the patient. Nevertheless, the cost of care is justified by the survival benefit.

Conclusion

In 2006, the CDC published revised guidelines for HIV screening which support HIV screening tests for all individuals. This new recommendation was made in view of evidence that routine testing is more likely to identify new cases of HIV infection than testing programs based on risk behaviors. The AI/AN population experiences a disproportionately high, and growing, rate of HIV infection that may be even higher because of misidentification of AI/AN in surveillance reports. Risk factors for HIV are also disproportionately high among AI/AN, and various psychological, cultural, physical, and financial barriers exist to make AI/AN less likely to seek testing for HIV than the general population. Providers may also be less likely to order HIV screening tests for AI/AN patients because of limited government funding, lack of communication, and lack of time.

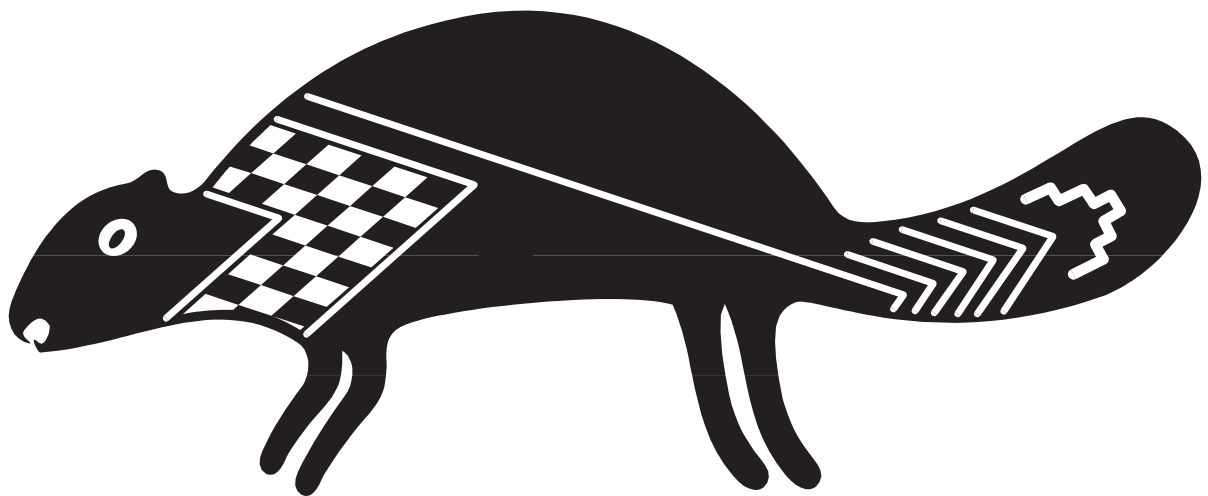
A screening program based on the CDC recommendations, but tailored to the needs of AI/AN, would benefit this population. Such a program would include an effort to educate both AI/AN patients and the health care providers who serve them, thus addressing the psychological, cultural, and communication barriers that prevent many AI/AN from being tested. Certainly, the program would face the challenge of reaching the majority of AI/AN, who are physically isolated on reservations. Resources needed to carry out this targeted

screening program would be relatively costly. However, HIV screening programs have been shown to be cost-effective even in settings with low HIV prevalence. Given the prevalence of HIV infection among AI/AN, the benefits of a targeted screening program would outweigh the financial and logistical costs. Over time, we can hope to meet the challenges of expanded HIV testing: the need for greater resources and increased participation by medical providers.

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Let the Cloud Be Your File Drawer

Diane Cooper MSLS, AHIP, NIH Library Services for IHS

Do you carry around files on a USB drive so you can have them handy when you want them? Or do you send them by e-mail to yourself to work on later? Instead, you could send them to the cloud. They would be available at home, at the office, or on the road. You could also share the files with colleagues to work on a project together.

The “cloud,” as you probably know, is the concept of storing files over the Internet by sending them to a third party (not yourself, not your organization). One way to access cloud storage is by using Dropbox®. If your storage needs aren’t large, it’s free.

What is It?

Dropbox is software that allows you to save and retrieve files anywhere you have Internet access. Also, when you upload a file online, it will automatically download to your PC. You can share with colleagues any folder in your Dropbox you choose. You will never lose a document because your files are safe in the cloud.

Great for Travel

You can maintain your travel schedule on your smart phone, and share it via Dropbox. Any changes you make will be shown automatically on the computers you have chosen, like a family member’s, or at the office. You can also share photos. Your photo file will be automatically updated all around any time you add to it.

Are my Files Secure?

Your files are safe while stored in your Dropbox, probably more so than on your computer. Dropbox uses the same encryption method as banks to secure customer data. No one can access your files unless you have invited them. However, security vulnerabilities may occur on your own computer, in your e-mail transmission of the key to your colleagues, and on their computers. Therefore we don’t recommend Dropbox for patient data.

Where Do I Get Dropbox?

Go to <http://www.dropbox.com> and follow these easy steps to download:

Click on the blue box “Download Dropbox.”

Next, click RUN then INSTALL. When you reach the window that asks if you have a Dropbox account, click “Don’t Have Dropbox Account.” A form will appear where you can create your own account using your e-mail address and password.

Next, select the free 2 GB of storage.

Choose “Typical” for your set-up type.

Click “Next” and click “Finish.”

How Do I Upload a File to Dropbox?

When you install it, an icon will appear in your tray. You can click on it and select “OPEN.” Or,

Open, Dropbox at <http://www.dropbox.com>.

Login with your new account information: e-mail and password.

Click the tab on the screen for “Upload.”

Click, “Choose Files.”

Look for the file you want on your desktop or in your documents file and click OPEN.

Now click on “Start Upload.”

You can now find the uploaded file in your Dropbox folder, and it’s in the cloud.

How Do I Share Files with Others?

Select the folder you wish to share.

In the dropdown box select “Shared Folder Options.”

Next, enter e-mail address of the person you want to share your folder with and write a message to them.

Click on “Share Folder.” An invitation e-mail will be sent to the person with whom you want to share a folder and gives them a link to accept your invitation. Once they accept your invitation, the folder will appear in their Dropbox account. Or, you can capture the key code and send your own e-mail, including the key.

Yes, they must have a Dropbox account, too, in order to access what you want to share! That’s it. Dropbox is easy to use. You will always have access to your documents while you are on business travel or anywhere when away from the office. If you need help using Dropbox, e-mail me anytime. We can set it up together.

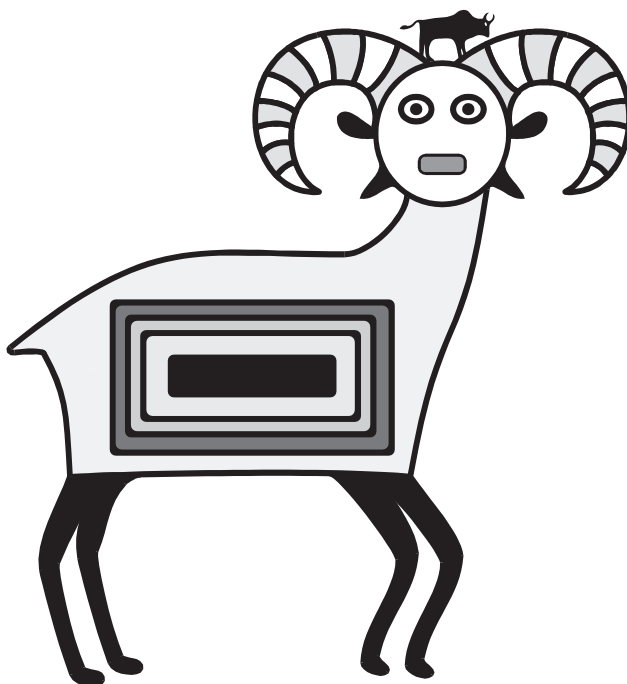
Erratum

In the October issue of *The Provider* (Volume 36, Number 10), in the article on pages 230-231, entitled *Help! I Can't Get This to Work!*, we left out the following acknowledgement:

Acknowledgements

We are very grateful to Katherine Sims, MLIS, for her skillful editing of the manuscript.

We apologize for this omission.



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Nurses' Reported Planned Behavior for the Provision of Smoking Cessation Advice to Their Native American Patients

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Background

The Indian Health Service (IHS) identified smoking cessation advice as a Government Performance and Results Act (GPRA) improvement target for fiscal year 2011. GPRA data reported as of April 22, 2011, show the average rate for the provision of smoking cessation advice to patients in 2010 was 4.1% for all eight Navajo Area hospitals, and increased to 7.8% in 2011.¹ The rate has improved, but still falls short of the national goal of 23.7%, and reinforces the need to study reasons for the low compliance in order to develop interventions that will help increase the rates and improve patient care.

The Centers for Disease Control and Prevention (CDC) Best Practice research indicates that one of the more effective tobacco prevention and control strategies is the provision of smoking cessation assessment and advice by a health care provider.² This strategy includes the screening of all patients for tobacco use and then the provision of a brief intervention on smoking cessation by a health care provider.

Clinical nurses are in the position to provide smoking cessation advice as a hospital-based intervention. A Cochrane systematic review of 42 studies and over 15,000 participants found that advice and support from nurses while the patient is hospitalized can assist the patient to quit smoking.³ Nurses traditionally provide patient education and work directly with the patient at the bedside. However, even with clinical guidelines and certain expectations for patient education, the desired behavior is not always attempted nor completed by the nurse.

Purpose

The purpose of this project was to understand what determines the nurse's intention, or their planned behavior, to provide smoking cessation advice to Native American patients. This understanding may assist in efforts to support and improve nursing performance for the GPRA target measure.

The theoretical basis is the Theory of Planned Behavior (TPB), which is an extension of the Theory of Reasoned Action (TRA). These two theories focus on the individual's motivating factors that determine the intention and the likelihood (the perceived control) for performing a desired behavior. These factors are dependent on how hard the person is willing to try or how much effort they are willing to exert in order to do the behavior, and is dependent on the person's actual control over the necessary resources, e.g., money, time, educational materials, knowledge, or available opportunities.⁴

The following are the definitions of the measures used in the survey questions, which are available from the authors:

1. Attitude is the nurse's overall evaluation, favorable or unfavorable, for providing the desired behavior
2. Behavioral belief and intention is the perceived likelihood that the nurse can provide the behavior
3. Subjective norms are the beliefs the nurse has about whether certain people (the referents) approve or disapprove of the behavior. This affects the motivation of the nurse to comply with what each referent thinks. In this study, the referents are the nurse's manager, the hospital administration, the nurse's coworkers, the patient's physician, the patient, and the patient's family.
4. Perceived behavioral control is a measure for the nurses' perception of their overall control, i.e., the ease or difficulty in doing the behavior. This control is further defined as one's control belief or the perceived likelihood or the constraints for doing the behavior, and perceived power for how the nurse perceives the positive or negative effect of a condition on the doing the behavior, e.g., does having educational material available make it easier or more difficult to provide smoking cessation advice.

Focus of the Project

The focus was to determine if the nurse's attitudes, the perceived subjective norms (social pressure from the referents), and the perceived behavioral control are effective predictors of the nurse's intent to provide patients the smoking cessation intervention.

Methods

This project is based on a prior study questionnaire.⁵ A pretested survey questionnaire was sent to the sample, which was any nurse listed in an electronic e-mail system and working in a local Indian Health Service reservation hospital with no other exclusions. The survey design explores attitudes, beliefs, and subjective norms as factors that may influence the nurse's perceived behavioral control and intention to provide the behavior (provision of the recommended hospital-based smoking cessation intervention). Questions about demographic information were included. The survey was voluntary and used both a paper survey and Survey Monkey®. A Nurse epidemiologist developed the survey under a National Institutes of Health (NIH) grant and agreed to allow the use of the survey for this project.⁵ The survey had been pilot tested in that initial research. Locally, two nurses pilot tested the survey prior to sending it to the nurses. Prior to the survey, permission to conduct this study was obtained from the hospital Professional Quality Services Director, the Chief Nurse Executive, and the Chief Executive Officer. The study was sent to the Union for their review.

Data Collection

Surveys, along with an explanation of the survey, a consent form for the survey, and some data regarding the reason for the smoking cessation advice requirement, were sent via e-mail to all nurses on the Friday before World No-Tobacco Day, May 31, 2011. The survey closed June 30, 2011. Data were collected using SurveyMonkey®. It was decided to use paper surveys after only five surveys were received after the first request. These paper surveys were randomly given to nurses as a convenience sample in June to assure a larger number of respondents who did not access their e-mail on a regular basis. A pre-labeled envelope was provided for the nurse to send in their survey and each was asked not to use any identifiers on the survey. No incentives were provided, and the survey was strictly voluntary. The data from the completed surveys were analyzed using the statistical software SPSS version 16.⁶

Measures

The survey questions were based on the four determinants of planned behavior using different response methods: multiple choice, Likert, and the option of writing in a response. There are several categories of questions. The category "Demographics" is multiple choice questions related to the nurse's age, sex, education, and years since receiving their nurse training. "Employment" questions are also multiple choice and relate to the shift worked, union membership, and the types of patients cared for. "Smoking Status" uses multiple-choice questions and relates to the respondents who are smokers, how much, and if they now smoke.

Whether the nurse counsels patients on smoking cessation

was the focus question for the nurse planned behavior and was answered using a 5-point Likert-type frequency scale with the responses of always (5), almost always (4), sometimes (3), rarely (2), and never (1). Attitudes, the behavioral beliefs, the subjective norms, and the perceived behavioral control related to the nurses' motivation for doing the planned behavior. The respondents were asked to read the statement relating to each attitude and subjective norms variable and then indicate their level of agreement or disagreement on a 7-point ranking agreement scale, from strongly disagree (1), somewhat disagree (2), slightly disagree (3), neither (4), slightly agree (5), somewhat agree (6), and strongly agree (7). A second 7-point ranking scale was used for beliefs regarding behavioral controls: greatly decrease (1), somewhat decrease (2), slightly decrease (3), neither (4), slightly increase (5), somewhat increase (6), and greatly increase (7).

The main question was to determine the association between the nurses' attitudes, beliefs, subjective norms, and perceived behavioral control toward the desired behavior of offering the smoking cessation intervention to the patient. Frequency and descriptive statistics were used to analyze the responses for demographics, smoking status, employment responses, and the smoking cessation attitudes responses. Crosstab descriptive analyses were used to correlate the responses of each category for the questions to the respondents and to obtain a sum of the scaled scores. To determine if any association existed between the provision of the smoking cessation intervention, Pearson chi square correlation was used for the categorical variables (gender, education, shift, union membership, and smoking status) and Spearman correlation was used for the continuous variables (age, years as a nurse). Internal consistencies of the items were measured using the Cronbach's coefficient alpha in the prior study and were not repeated in this study.⁵ Summation scores were calculated for the attitudes toward behavior and the behavioral beliefs. The subjective norms scale was created by multiplying each score by the corresponding "motivation to comply" score. These products were then summed. The same process was used for the perceived behavioral control and the corresponding perceived power scores.

Results

Fourteen percent (24 of the target N of 177 nurses) responded, 10 responding to the initial request and 14 with the second request using both the electronic and paper surveys. One of the surveys had a large quantity of missing data, so only 23 respondents fully completed the survey. These are the results from the 24 completed surveys for the reported demographics and other frequency data:

1. 14% (24 of the target N of 177 nurses) responded
2. 13% (3/23) male and 87% (20/23) female
3. Age groups:
 - a. 52.2% (12/23) 50 - 59 years

- b. 21.7% (5/23) over 59 years
 - c. 17.4% (4/23) 40 - 49 years
 - d. 8.7 % (2/23) less than 40 years
4. Year receiving their initial nurse training:
 - 45.8% (11/24) during 1980 - 1989
 - 25% (6/24) 1990 - 1999
 - 12.5% (3/24) 1970 - 1979
 - 8.3% (2/24) after 1999
 - 8.3% (2/24) stated “other”
 5. Number of years as a nurse:
 - 58.3% (14/24) have been a nurse for over 20 years
 - 41% with less than 20 years
 6. Most reported shift worked:
 - Day shift (7 - 3 or 7A - 7P) 62.5% (15/24)
 - Other 29.2% (1/24)
 - Rotating 4.2% (1/24)
 - Nights (11 - 7, 7P - 7A) 4.2% (1/24)
 7. Union membership:
 - 62.5% (15/24) reported non membership
 - 37.5% (9/24) reported membership
 8. Smoking status reports:
 - 37.5% (9/24) smoked five packs or more of cigarettes in their life
 - 58.3% (14/24) none
 9. Of those smokers (greater than 5 packs in their life) and who currently smoke:
 - 22.2% (2/9) reported smoking every day
 - 77.8% (7/9) report that they no longer smoke
 10. Of these who no longer smoke:
 - 85.7% (6/7) indicated that they quit more than 5 years ago
 - 14.3% (1/7) quit 1 year ago
 11. Of those responding to the survey:
 - 16.7% (2/12) is the current reported rate for smokers [which is similar to the 2009 reported lower rate of 16.6% for adult smokers in New Mexico⁷]

Beliefs that the nurse is likely to provide the smoking cessation behavior:

1. 65% (15/23) have the knowledge of behavioral techniques
2. 74% (17/23) have the knowledge of the pharmacologic aides and the knowledge about the effects of smoking cessation
3. 74% (17/23) also felt they have the time to bring up the conversation during their shift
4. 74% (17/23) feel that they are comfortable in bringing up the conversation
5. 78% (18/23) feel that they have available educational material
6. 65% (15/23) have smoking cessation advice education video equipment
7. 70% (16/23) feel that the openness of the patient for the conversation will likely increase the nurse’s behavior,

8. 48% (11/23) felt that the nurse’s personal smoking status would affect their likelihood of providing the smoking cessation advice.

Behavioral beliefs about offering the cessation advice were generally positive:

1. 70% (16/23) do not believe that the advice will threaten their relationship with the patient
2. 70% believe that it is not a waste of time
3. 83% (19/23) do not believe that it is an invasion of the patient’s privacy
4. 70% (16/23) do not believe that the advice provision would leave them little time to do other patient care
5. 70% (16/23) do not believe that the advice would make them feel frustrated
6. 78% (18/23) believe that the advice may prompt the smoker to quit later

Beliefs about the patient’s health and the advice:

1. 74% (17/23) do not believe that a person’s health is mostly genetic and that the smoking does not influence their health
2. 87% (20/23) agree that smoking cessation will make a difference even for the patient who has smoked for 20 years
3. 78% (18/23) agree that smoking cessation will make a difference even for patients who are very ill
4. 91% (21/23) agree that smoking cessation will make a difference even for those over the age of 70 years
5. 96% (22/23) agree that quitting smoking has a positive effect on a person’s health.

Time during which the nurse is more likely to provide smoking cessation advice:

1. 47% (11/23) give the advice during the admission interview
2. 47% (11/23) give the advice during the discharge interview
3. 52% (12/23) disagreed that they will only give the advice when the patient asks about information for smoking cessation

Data Analysis

The following are questions that had a significant correlation between the smoking cessation advice provided by the nurse and each of the four measures for attitudes, beliefs, subjective norms, and behavioral control.

Nurses’ “Attitudes”:

1. Nurses have an obligation to advise patients to quit smoking
2. All patients who smoke should be given smoking cessation advice by a nurse during hospitalization
3. Patients with a non smoking-related illness should be advised to quit smoking

4. Only patients ready to quit smoking should receive smoking cessation advice from a nurse during hospitalization (this response was negatively correlated with the nurse attitude, implying that the nurse will give the advice even if the patient is not ready to quit)

“Perceived Behavioral Control” statements:

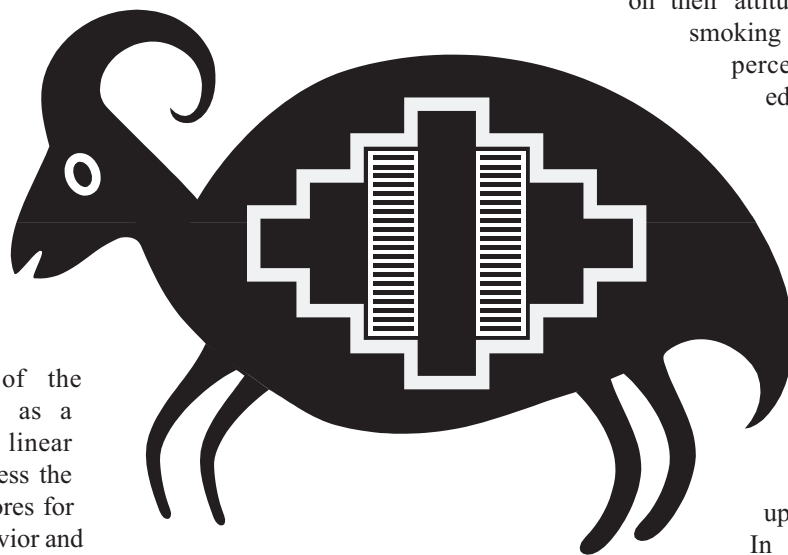
1. I have knowledge of behavioral techniques or skills that are useful for a patient to quit smoking
2. I have knowledge about pharmacologic aides for smoking cessation advice
3. I am comfortable bringing up smoking cessation in a conversation with a patient
4. There is educational material related to smoking cessation for patients available on my unit

“Subjective Norms” statements:

1. Families of patients expect me to help their family member by offering smoking cessation advice

For the test of association of the categorical variables of gender, education, shift worked, union membership, and smoking status with the delivery of smoking cessation to their patients, and the variables of age, years as a nurse and attitudes toward smoking cessation, no statistical significance was found, which may be due to the very small sample size.

Using the delivery of the smoking cessation advice as a continuous variable, a linear regression was used to regress the summation of the scaled scores for the attitudes toward the behavior and the behavioral beliefs. The total variance explained by the regression model was 33.4%, F change (4, 18) = 2.255, $p = .104$. A power of 0.8 with a p -value value of 0.15 was used rather than the traditional 0.05⁸ due to the small sample size. The statistically significant measures predicting the delivery of the smoking cessation advice by the nurse to the patient were the nurse’s perceived subjective norms and the corresponding perceived power in providing the desired smoking cessation advice to the patient (p value 0.081).



Discussion

In the descriptive frequency data for the beliefs of the nurse, it is interesting to note that 52% (12/23) have the belief that hospital administration believes it is important for the nurse to give patients the advice to quit smoking, 43% (10/23) have the belief that the physician believes it is important, and 39% (9/23) have the belief that the nurse manager believes it is an important behavior for the nurse. The implication is that the nurse feels empowered to provide the smoking cessation behavior regardless of their perceived beliefs of these referent groups.

For the questions relating to how often the nurses counsel their patients who smoke to stop smoking, 30.4% (7/23) always did so, 40.1% (9/23) almost always or only sometimes did so, and 30.4% (4/23) rarely did so. In addition, 58.3% (14/23) of the nurses indicated that for the smokers who they took care of in the week prior to the survey, they provided the smoking cessation advice. Even though 44% (10/23) agree that offering the brief advice will result in successful smoking cessation, 35% (8/23) disagree with the statement, and 27% (6/23) neither agree nor disagree. This implies a need for education to assist the nurse in understanding how significant their role is in providing smoking cessation advice.

Because of the finding that the motivating factors for the nurses’ intention to do the planned behavior is based on their attitudes toward providing the smoking cessation advice and their perceived power to do so, education and support should continue by updating nurses on the current best evidence and information for smoking cessation advice, updates on behavioral techniques and pharmacologic aides designed for smoking cessation, and provision of updated educational material.

In addition, hospital leaders can remove identified barriers and provide support when needed and requested to assure that the smoking cessation advice behavior and the perceived power to provide the smoking cessation advice will be enhanced.

Limitations of this project include the small number of respondents, and the fact that the survey used self-reported data. Other nurses not responding may have different views about their cessation delivery practices. The non-significant results may be due to the insufficient power of the study, which

was 0.41 instead of the desired 0.80.⁷ Due to these limitations, further study is needed to obtain a more comprehensive understanding of barriers and facilitators of the desired behavior and to obtain a more representative sample.

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Editor's note

The appendix that displayed the survey questions is not included, but is available from the authors on request.



This is a page for sharing “what works” as seen in the published literature, as well as what is being done at sites that care for American Indian/Alaskan Native children. If you have any suggestions, comments, or questions, please contact Steve Holve, MD, Chief Clinical Consultant in Pediatrics at sholve@tcimc.ihs.gov.

IHS Child Health Notes

Quote of the month

“Not everything that can be counted counts, and not everything that counts can be counted.”

Einstein

Articles of Interest

Cortes JE, et al. Rotavirus vaccine and health care for diarrhea. *N Engl J Med.* 2011;365:1108-117.

This study confirms what many of us have seen in clinical practice since 2006: increased coverage with the rotavirus vaccine has led to a decrease in hospitalizations and health care costs related to diarrhea in children.

The lead author, Jennifer Cortes, MD, estimated that the rotavirus vaccine has prevented about 65,000 hospitalizations and saved over \$200 million dollars in health care costs from 2007 to 2009 for children < 5 years of age. Overall, there was a 75% decline in rotavirus related hospitalizations. Of note is that infants who had received even one dose of the rotavirus vaccine, and not the entire three dose series, had decreased rates of diarrhea and hospitalization.

Editorial Comment

These data are especially good news for those of us who care for AI/AN children. Previous studies have shown that the rate of hospitalization for diarrhea for AI/AN infants < 12 months is nearly twice the US rate. Also note that even one dose of rotavirus vaccine decreases the incidence of disease, so that inability to complete the series before age 8 months is not a reason to withhold the vaccine.

Infectious Disease Updates

Rosalyn Singelton, MD, MPH

13-valent Pneumococcal Conjugate Vaccine (PCV13) for pneumococcal disease

Pneumococcus is a major cause of invasive bacterial disease among all ages around the world. Before Prevnar® (PCV7), southwestern American Indian and Alaska Native children <5 years had rates of invasive pneumococcal disease (IPD) 4 - 24 fold higher than the US general child population. After implementing routine Prevnar® vaccination, vaccine type disease nearly disappeared in the US, and overall IPD decreased by 76%. In Alaska, the decline among Alaska Native children was hampered by an increase in non-vaccine serotypes, particularly multi-drug resistant 19A.

The 13-valent pneumococcal conjugate vaccine (PCV13) was developed to provide coverage for 6 additional serotypes (1, 3, 5, 6A, 7F, 19A). In the US, 64% of cases in 2007 were caused by PCV13 serotypes. Because of very high rates of non-PCV7 type in Alaska Native children from the YK Delta region, PCV13 was introduced in this region as part of a clinical trial in January 2009. After introduction of PCV13 and rapid uptake following vaccine, both PCV13 and non-PCV13 serotype disease decreased 75% from the pre-vaccine period (2005 - 2008) to the PCV13 period (Jan/2009 - Aug/2011). There have been no cases of PCV13 type disease in children who received one or more doses of vaccine. A similar decline occurred among all Alaska Native children. Ongoing surveillance for IPD is critical to monitor progress toward controlling IPD, but the initial data are encouraging.

POSITION VACANCIES

Editor's note: As a service to our readers, The IHS Provider will publish notices of clinical positions available. Indian health program employers should send brief announcements as attachments by e-mail to john.saari@ihs.gov. Please include an e-mail address in the item so that there is a contact for the announcement. If there is more than one position, please combine them into one announcement per location. Submissions will be run for four months and then will be dropped, without notification,, but may be renewed as many times as necessary. Tribal organizations that have taken their tribal "shares" of the CSC budget will need to reimburse CSC for the expense of this service (\$100 for four months). The Indian Health Service assumes no responsibility for the accuracy of the information in such announcements.

Physician

Family Nurse Practitioner

Northern Valley Indian Health, Inc.; Chico and Willows, California

Northern Valley Indian Health, a well-established provider for the Glenn and Butte County service area, has immediate openings for a physician and a family nurse practitioner. The vacancies are in our Chico and Willows clinics and present a great opportunity for professional growth. The successful applicants will demonstrate a commitment for excellence and possess well-developed interpersonal skills. You must be a graduate of an accredited United States medical school, and possess current California physician or FNP licensure and DEA controlled substance registration. Great benefits package; salary is commensurate with experience. Student loan repayment programs available. Apply at nvih.org; e-mail jobs@nvih.org; or fax to (530) 896-9406. (11/11)

Licensed Clinical Social Worker

Medical Clinic Manager

Consolidated Tribal Health Project, Inc.; Calpella, California

Consolidated Tribal Health Project, Inc. is a 501(c)(3) non-profit, ambulatory health clinic that has served rural Mendocino County since 1984. CTHP is governed by a board comprised of delegates from a consortium of nine area tribes, eight of which are federally recognized, and one that is not. Eight of the tribes are Pomo and one is Cahto. The campus is situated on a five-acre parcel owned by the corporation; it is not on tribal land.

CTHP has a Title V Compact, which gives the clinic self governance over our Indian Health Service funding allocation. An application for either of these positions is located at www.cthp.org. Send resume and application to Karla Tuttle,

HR Generalist, PO Box 387, Calpella, California 95418; fax (707) 485-7837; telephone (707) 485-5115 (ext. 5613). (10/11)

Mid-Level Providers:

Nurse Practitioners/Physician Assistant

Aleutian Pribilof Islands Association (APIA); St. Paul and Unalaska, Alaska

This is a renowned bird watcher's paradise! Provide health care services to multiple generations of families. We are recruiting for mid-level providers for both sites: St. Paul and Unalaska, Alaska. Duties include primary care, walk-in urgent care, and emergency services; treatment and management of diabetes a plus. Must have the ability to make independent clinical decisions and work in a team setting in collaboration with referral physicians and onsite Community Health Aide/Practitioners. Sub-regional travel to other APIA clinics based on need or request. Graduate of an accredited NP or PA program. Requires a registration/license to practice in the State of Alaska and current ACLS and PALs. Minimum experience: 2 - 3 years in a remote clinical setting to include emergency care services and supervisory experience. Indian Health Service experience a plus. Will be credentialed through Southcentral Foundation. Positions available immediately. Clinic hours 8 am - 4:30 pm, Monday through Friday, and rotations scheduled and/or shared for on-call during evenings and weekends. Salary DOE, plus benefits. Contractual two-year commitment with hiring bonus, housing allowance, and continuing education to keep license current. Job description available upon request. Please send your *curriculum vitae* to Nancy Bonin, Human Resources Director, via e-mail to nancyb@apiai.org. (7/11)

Registered Nurse

Wassaja Memorial Health Center;

Fort McDowell Yavapai Nation, Arizona

The Wassaja Memorial Health Center is currently seeking a registered nurse with a pay rate of \$43,766 to \$52,519 per annum (DOE). The registered nurse will provide direct patient care to patients of the Wassaja Memorial Health Center, an outpatient facility. This position requires a current active license as a registered nurse in the state of Arizona with at least two years experience in a clinical environment. Current Arizona driver's license and meet FMYN insurance standards.

The Wassaja Memorial Health Center is an outpatient facility located on the Fort McDowell Yavapai Nation in Arizona. Fort McDowell Yavapai Nation is located within Maricopa County about twenty-three miles northeast of Phoenix. The Wassaja Memorial Health Center provides care to all IHS eligible patients with proof of membership. The

clinic operates Monday through Thursday from 7:30 am to 5:30 pm. The full-time medical staff includes a physician, a nurse practitioner, a physical fitness specialist, and a pharmacist. The facility offers the following clinical services: family medicine, dietician, podiatry, eye, community health, and on-site pharmacy.

The Fort McDowell Yavapai Nation offers a highly competitive compensation program ranging from medical and life insurance to disability and retirement plans. Some benefit programs require contributions from the employee, but most are fully paid by the company. If you are interested in applying, please contact Sarah Gonzales, HR, at (480) 789-7219; e-mail sgonzales@ftmcdowell.org, or submit application/resume to recruiter@ftmcdowell.org. To view the job description and print the application, please visit www.ftmcdowell.org. (7/11)

Family Practice Physician (4)

Physician Assistant (1)

Dentist (2)

Pharmacist (2)

Nurse (4)

Standing Rock Service Unit; Fort Yates, North Dakota

The Standing Rock Service Unit is a fully accredited 12-bed hospital and outpatient services facility located along the Missouri River in Fort Yates, North Dakota. In addition to inpatient, outpatient, emergency, dental, behavioral health, and optometry services, a dialysis unit (eight stations) is also available to serve our patients' needs. Indeed, through strong partnerships with health care providers in nearby Bismarck, North Dakota (approximately 60 miles away) and extension outpatient centers in Cannonball, North Dakota, McLaughlin, South Dakota, Bullhead, South Dakota, and Wakpala, South Dakota, the Standing Rock Service Unit provides comprehensive services to over 9,000 American Indians in North and South Dakota. If you are interested in a position or would like more information, please contact Kim Lawrence at (605) 226-7532; e-mail kim.lawrence@ihs.gov or Kara Todd-Iwen at (605) 226-7808; e-mail kara.todd-iwen@ihs.gov. (7/11)

Family Practice Physician (2)

Physician Assistant (1)

Pharmacist (2)

Nurse (4)

Cheyenne River Service Unit; Eagle Butte, South Dakota

Inpatient, emergency room and outpatient services including specialty care for obstetrics, physical therapy, and optometry services are provided. Hospital and emergency room services are the only services within 90 miles of Eagle Butte. A new six-bed short stay facility is under construction and due for completion in 2011. Five providers staff this 13-bed unit. The Cheyenne River Service Unit provides comprehensive services to over 9,000 American Indians in South Dakota. If you are interested in a position or would like

more information, please contact Kim Lawrence at (605) 226-7532; e-mail kim.lawrence@ihs.gov or Kara Todd-Iwen at (605) 226-7808; e-mail kara.todd-iwen@ihs.gov. (7/11)

Family Practice Physician (2)

Pharmacist (1)

Spirit Lake Service Unit; Fort Totten, North Dakota

The Spirit Lake Nation in North Dakota is served by a four-physician ambulatory care facility as well as a dental clinic and a diabetes program, a pharmacy with three pharmacists, a radiology department with state-of-the-art ultrasound imaging, a complete clinical laboratory, in addition to a mental health department. The Spirit Lake Service Unit provides comprehensive services to over 6,000 American Indians in North Dakota. If you are interested in a position or would like more information, please contact Kim Lawrence at (605) 226-7532; e-mail kim.lawrence@ihs.gov or Kara Todd-Iwen at (605) 226-7808; e-mail kara.todd-iwen@ihs.gov. (7/11)

Family Medicine Physician

Internal Medicine Physician

Emergency Medicine Physician

Nurse Practitioner

Physician Assistant

Sells Service Unit; Sells, Arizona

The Sells Service Unit (SSU) in southern Arizona is recruiting for board certified/board eligible emergency room/family physician to join our experienced medical staff. We are also looking for a family/pediatric nurse practitioner or physician assistant for our school health program, and a family nurse practitioner for the Sells Hospital outpatient department.

The Sells Service Unit is the primary source of health care for approximately 24,000 people of the Tohono O'odham Nation. The service unit consists of a Joint Commission accredited 34-bed hospital in Sells, Arizona and three health centers: San Xavier Health Center, located in Tucson, Arizona, the Santa Rosa Health Center, located in Santa Rosa, Arizona, and the San Simon Health Center located in San Simon, Arizona with a combined caseload of approximately 100,000 outpatient visits annually. Clinical services include family medicine, pediatrics, internal medicine, prenatal and women's health care, dental, optometry, ophthalmology, podiatry, physical therapy, nutrition and dietetics, social work services, and diabetes self management education.

Sixty miles east of the Sells Hospital by paved highway lies Tucson, Arizona's second largest metropolitan area, and home to nearly 750,000. Tucson, or "The Old Pueblo," is one of the oldest continuously inhabited sites in North America, steeped in a rich heritage of Indian and Spanish influence. It affords all of southern Arizona's limitless entertainment, recreation, shopping, and cultural opportunities. The area is a favored tourist and retirement center, boasting sunbelt attributes and low humidity, with effortless access to Old

Mexico, pine forests, snow sports, and endless sightseeing opportunities . . . all within a setting of natural splendor.

We offer competitive salary, relocation/recruitment/retention allowance, federal employment benefits package, CME leave and allowance, and loan repayment. For more information, please contact Peter Ziegler, MD, SSU Clinical Director at (520) 295-2481 or by e-mail at Peter.Ziegler@ihs.gov. (7/11)

**Associate Director for Tribal Support,
Office for State, Tribal, Local, and Territorial Support
Centers for Disease Control and Prevention;
Atlanta, Georgia**

The Office for State, Tribal, Local, and Territorial Support (OSTLTS) is currently seeking exceptional candidates for the position of Associate Director of Tribal Support. The position requires knowledge of the unique cultural, environmental, social, economic, political, and other interrelated factors that impact the health of American Indian/Alaska Native (AI/AN) populations. The salary range is \$118,846 to \$154,501 per year.

The OSTLTS serves as the primary link between the Centers for Disease Control and Prevention (CDC), the Agency for Toxic Substances and Disease Registry (ATSDR), and Tribal governments. OSTLTS has responsibility for coordinating public health programs and policies that focus on AI/AN communities.

To apply, visit www.usajobs.gov. Candidates external to the federal government may apply to job announcement HHS-CDC-DE-11-487758. Federal government merit promotion job announcement number is HHS-CDC-MP-11-487665. The closing date for this job announcement is Wednesday, July 20, 2011. Questions may be directed to Dr. Melanie Duckworth at (404) 498-0300 or mhd1@cdc.gov. Please do not submit resumes to this e-mail address. (7/11)

**Family Practice Physician
Family Nurse Practitioner
Physician Assistant
Psychiatrist**

**Bay Mills Health Center/Bay Mills Indian Community;
Brimley, Michigan**

The Bay Mills Health Center is seeking a family practice physician, MD/DO, board certified. Must have completed a residency program and have a Michigan license or able to obtain one. New graduates are welcome to apply. We are also

seeking a full time psychiatrist who is board certified, able to obtain a Michigan license and who has completed a residency program. The primary focus is on the adult population with some children in the patient case load. We are in need of a certified mid-level, an FNP or a PA-C with a background in family practice.

The health center is located in the beautiful eastern Upper Peninsula of Michigan on the Bay Mills Indian Reservation. We are located on the shores of Lake Superior, bordering Canada, and are rich in culture. The area is the outdoor enthusiast's dream.

We are an outpatient facility open 8 am to 4:30 pm, Monday through Friday. We have an onsite laboratory, pharmacy, x-ray, behavioral health, dental, community health, and social service departments. Physicians see between 18 - 21 patients per day, with adequate time to be acclimated to the facility and procedures. There are no nights or weekends on call. The Bay Mills Health Center was established in 1976 and is a Federally Qualified Health Center. The health center is open to the general public and is Joint Commission accredited. Our patient focus is geared toward prevention. We are striving to become a Patient Centered Medical Home. We offer a competitive salary, student loan repayments options, CME leave and allowance, a generous leave policy, and comprehensive benefits. If you are interested, please contact Audrey Breakie at (906) 248-8327 daytime, (906) 437-5557 evenings, or e-mail abreakie@baymills.org. (7/11)

**Family Practice Physician
Menominee Tribal Clinic; Keshena, Wisconsin**

Join seven experienced primary care physicians in beautiful wooded north central Wisconsin 45 miles from Green Bay. We provide comprehensive primary care for Wisconsin's longest residing residents at a large, established clinic on the banks of the pristine Wolf River. Practice in an efficient setting with committed colleagues, your own nurse, and a robust electronic health record. Inpatient and obstetrical care is provided at a 25 bed community hospital nine miles away, where family doctors do C-sections, colonoscopies, and EGDs. Live in a safe town of 8,000 with great schools and endless recreational opportunities. Competitive compensation available along with loan repayment (NHSC and State of Wisconsin). Contact Kevin Culhane, MD at (715) 799-5786; or e-mail at kevinc@mtclinic.net. (7/11)

MEETINGS OF INTEREST

Advancements in Diabetes Seminars

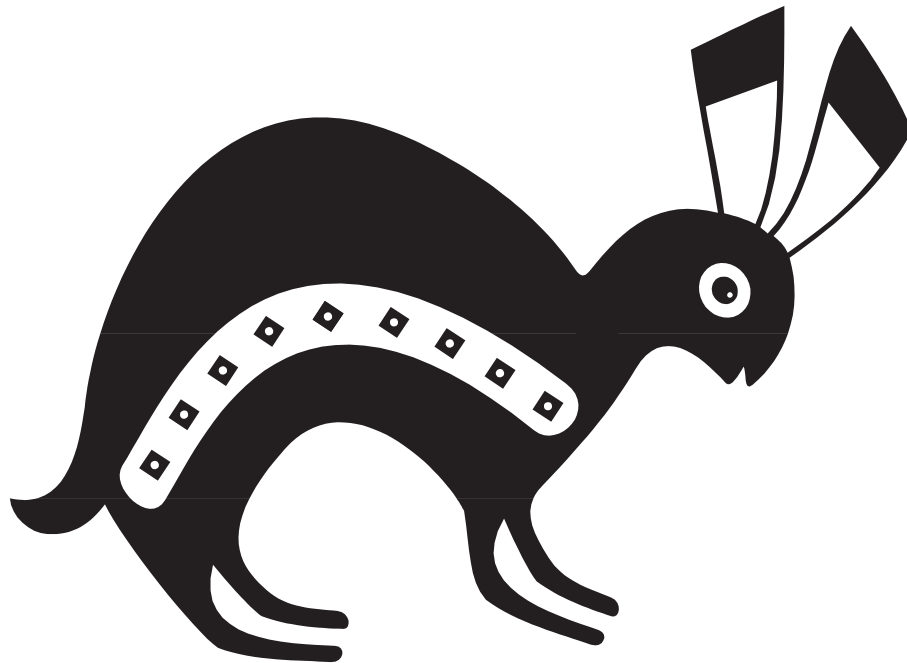
Monthly; WebEx

Join us monthly for a series of one-hour WebEx seminars for health care program professionals who work with patients who have diabetes or are at risk for diabetes. Presented by experts in the field, these seminars will discuss what's new, update your knowledge and skills, and describe practical tools you can use to improve the care for people with diabetes. No registration is necessary. The accredited sponsors are the IHS Clinical Support Center and IHS Nutrition and Dietetics Training Program.

For information on upcoming seminars and/or previous seminars, including the recordings and handouts, click on this link and see Diabetes Seminar Resources: <http://www.diabetes.ihs.gov/index.cfm?module=trainingSeminars>

Available EHR Courses

EHR is the Indian Health Service's Electronic Health Record software that is based on the Resource and Patient Management System (RPMS) clinical information system. For more information about any of these courses described below, please visit the EHR website at http://www.ihs.gov/CIO/EHR/index.cfm?module=rpms_ehr_training. To see registration information for any of these courses, go to <http://www.ihs.gov/Cio/RPMS/index.cfm?module=Training&option=index>.



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Indian Health Service
Clinical Support Center
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THE IHS PRIMARY CARE PROVIDER

A journal for health professionals working with American Indians and Alaska Natives

THE IHS PROVIDER is published monthly by the Indian Health Service Clinical Support Center (CSC). Telephone: (602) 364-7777; fax: (602) 364-7788; e-mail: the.provider@ihs.gov. Previous issues of THE PROVIDER (beginning with the December 1994 issue) can be found on the CSC Internet home page (<http://www.ihs.gov/Provider>).

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Opinions expressed in articles are those of the authors and do not necessarily reflect those of the Indian Health Service or the Editors.

Circulation: The PROVIDER (ISSN 1063-4398) is distributed to more than 6,000 health care providers working for the IHS and tribal health programs, to medical schools throughout the country, and to health professionals working with or interested in American Indian and Alaska Native health care. If you would like to receive a copy, send your name, address, professional title, and place of employment to the address listed below.

Publication of articles: Manuscripts, comments, and letters to the editor are welcome. Items submitted for publication should be no longer than 3000 words in length, typed, double-spaced, and conform to manuscript standards. PC-compatible word processor files are preferred. Manuscripts may be received via e-mail.

Authors should submit at least one hard copy with each electronic copy. References should be included. All manuscripts are subject to editorial and peer review. Responsibility for obtaining permission from appropriate tribal authorities and Area Publications Committees to publish manuscripts rests with the author. For those who would like more information, a packet entitled "Information for Authors" is available by contacting the CSC at the address above or on our website at www.csc.ihs.gov.