THE IHS PRIMARY CARE PROVIDER

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

March 2012 **Volume 37 Number 3**

Significant Changes to GPRA Beginning in Fiscal Year 2013

Wendy Blocker, RN, MSN, Public Health Analyst, National GPRA Support Team, California Area Indian Health Service, Sacramento, California; Christine Brennan, MPH, Public Health Analyst, National GPRA Support Team, California Area Indian Health Service, Sacramento; Amy Patterson, PhD, Public Health Analyst, National GPRA Support Team, California Area Indian Health Service, Sacramento; Rachel Pulverman, BS, Editorial Assistant, National GPRA Support Team, California Area Indian Health Service, Sacramento; Carolyn Aoyama, CNM, MPH, Senior Nurse Consultant, Office of Public Health Support, Indian Health Service, Rockville, Maryland; Diane Leach, MA, Public Health Analyst, Office of Public Health Support, Indian Health Service, Rockville; and Susan Karol, MD, FACS, Chief Medical Officer, Indian Health Service, Rockville

In January 4, 2011 President Barack Obama signed into law the GPRA Modernization Act of 2010 (GPRAMA), Public Law 111-352. The GPRAMA strengthens the Government Performance and Results Act of 1993 (GPRA), Public Law 103-62 by requiring federal agencies to use performance data to drive decision making. This article describes the changes to national performance reporting for the Indian Health Service (IHS) that are required by GPRAMA beginning in fiscal year (FY) 2013.

Starting in FY 2013, the Department of Health and Human Services (HHS) will prepare the HHS annual performance plan and performance report using the GPRAMA measures reported from all the HHS operating and staff divisions (OP/DIV), including the IHS. In order to make this manageable at the department level, HHS has decreased the number of performance measures that each OP/DIV will report. As a result, as of FY 2013, the IHS will report six measures, which will be known as GPRAMA measures. These six measures are:

- Proportion of adults 18 and older who are screened for depression;
- American Indian and Alaska Native patients with diagnosed diabetes achieve ideal glycemic control (A1c less than 7.0%);
- American Indian and Alaska Native patients, 22 and older, with coronary heart disease are assessed for five cardiovascular disease (CVD) risk factors (Note: the denominator for this measure is no longer patients with ischemic heart disease);
- American Indian and Alaska Native patients, aged 19–35 months, receive childhood immunizations (4:3:1:3:3:1:4);
- 100% of hospitals and outpatient clinics operated by the Indian Health Service are accredited (excluding tribal and urban facilities);
- Implement recommendations from tribes annually to improve the tribal consultation process.

In this Issue…

46 Significant Changes to GPRA Beginning in Fiscal Year 2013
49 Help Us Save Money
49 Electronic Subscription Available
50 Colorectal Cancer Screening Activities in Indian Country: An Update
52 Colorectal Cancer Awareness Month
54 Advancements in Diabetes Seminars
55 Evaluation of Health Literacy Assessment Tools Among American Indian Patients
63 The 16th Annual Elders Issue
64 IHS Child Health Notes
66 Meetings of Interest
67 Patient Billing Coordinators: An Active Approach Yields Big Results for Winnebago
68 Position Vacancies

The remaining GPRA measures will be reclassified as "budget measures" and will continue to be reported nationally in the IHS annual budget request. The IHS will monitor our agency's performance by quarter and report final budget measure results in the annual IHS budget request, the Congressional Justification (CJ). Even though their designation has changed from GPRA measures to budget measures, they are still considered national performance measures.

Additionally, the current Performance Assessment Rating Tool (PART) measures and national program measures that are currently reported in the IHS CJ will also be reclassified as "budget measures" and will be reported in the annual budget request.

In summary, the IHS will report the six GPRAMA measures in the FY 2013 IHS CJ and the HHS Online Performance Appendix. The remaining 84 budget measures reported in the FY 2013 IHS CJ will be a combination of GPRA performance measures, performance or PART measures, and national program measures. The budget measures will be reported as they have been for the past few years; clinical measures will be reported via the Clinical Reporting System (CRS), and IHS headquarters programs will track their respective PART and program measures.

Frequently Asked Questions: How Does the Change from GPRA to GPRAMA Performance Measures Affect Me?

What are GPRA performance measures?

GPRA 1993 requires the integration of federal budgets and performance to demonstrate the use of appropriated federal dollars. Within the IHS, GPRA performance measures represent clinical services provided to American Indian/Alaska Native (AI/AN) patients; the GPRA measures are a marker of access to health care services. The IHS is reporting GPRA results in our annual budget documents through FY 2012.

What are GPRAMA performance measures?

Reporting on GPRAMA performance measures begins in FY 2013. Instead of reporting GPRA at the IHS level, performance reporting will be at the HHS level. HHS is including six IHS GPRAMA measures in the annual HHS performance report. These are the official performance measures for IHS; the previous GPRA measures will continue to be reported nationally and will be re-named as budget measures in 2013. The name change does not reduce the importance of these measures.

How is GPRAMA different from Meaningful Use?

GPRAMA is a federal law that requires performance be integrated into annual budget requests. The six IHS GPRAMA measures are reported at the HHS level.

Meaningful Use of a certified electronic health record (EHR) technology is part of the American Recovery and Reinvestment Act of 2009 (ARRA). The Centers of Medicare and Medicaid Services (CMS) provide incentive payment programs for eligible professionals and eligible hospitals that adopt and demonstrate meaningful use of certified EHR technology at the local level.

What will change at the local facility level?

Nothing will change at the local level in terms of what is required for performance reporting. The facility level is where most patient care is provided in the IHS, and sites will continue to enter visit information into the local RPMS server. Sites will still run their *CRS National GPRA and PART Report* at the end of the 2nd, 3rd, and 4th quarters using CRS for the existing 22 GPRA measures. Non-CRS sites will also run their quarterly reports, if they choose to report data. All quarterly CRS reports will be electronically aggregated at the Area level and manually aggregated at the national level. At the local level, improvement activities will still concentrate on the 22 GPRA measures since they are still national performance measures and reported in each annual IHS budget.

What about the CRS software?

All the CRS software and reports will continue to be supported by the IHS. CRS will continue to be updated by the IHS CRS Team and the CRS programmers. Local sites will continue to run quarterly reports that will be exported to their Area GPRA coordinator for Area aggregation. Reports from CRS version 13.1 will be used for at least the first year of the GPRAMA measures.

When does IHS begin reporting on the four CRS reported GPRAMA measures?

The FY 2013 GPRA year runs from July 1, 2012 through June 30, 2013. Many local sites will continue to run monthly reports which will provide local results for quality improvement activities.

Where can I find the budget measure national results in the IHS CJ?

The IHS Division of Budget Formulation has a web page on the IHS website. Select "Congressional Justifications" from the left column to review annual IHS CJs. Near the end of each program narrative in the CJ is a table called Outputs and Outcomes Table. The 90 total budget measure results are on these tables.

How does the GPRAMA CVD comprehensive assessment measure differ from the existing GPRA CVD measure?

The denominator for the FY 2012 CVD comprehensive assessment measure is active ischemic heart disease (IHD) patients ages 22 and older. The denominator for the GPRAMA CVD comprehensive assessment measure in FY 2013 is active

coronary heart disease (CHD) patients ages 22 and older. The denominator for CHD removes heart failure codes from the previous CVD denominator, adds angina to the GPRAMA denominator as well as a series of procedure codes added to detect coronary heart disease when the ICD codes failed to do so. Currently, the CVD comprehensive assessment measure with the new CHD denominator is a GPRA Developmental measure. Local results for this measure can be found in the GPRA Developmental section of the *CRS National GPRA and PART Report* until the measure is moved to the GPRA report section in CRS version 13.0 with an anticipated release date of December 2012.

Are there other performance (budget) measure changes?

Two of the dental measures will change. Dental Sealants and Topical Fluorides have been reported as counts; starting in FY 2013 these two measures will be reported as proportions of eligible patients who have received sealants or fluorides. FY 2013 will be the baseline year for collecting these results.

Additionally, breastfeeding rates currently are reported from federally operated sites only. Starting in FY 2013 the IHS will report breastfeeding rates as an aggregate result from federally operated sites and tribally operated sites. FY 2013 will be a baseline year for this measure.

Who should I contact if I have questions?

If your questions are about the six GPRAMA measures, contact Ms. Gayle Riddles, IHS Performance Officer at *gayle.riddles@ihs.org*.

If your questions are about the other 84 IHS budget measures, or CRS, contact either the National GPRA Support Team at *caogpra@ihs.gov*, or Ms. Diane Leach, National Budget Measures Coordinator at *diane.leach@ihs.gov*.

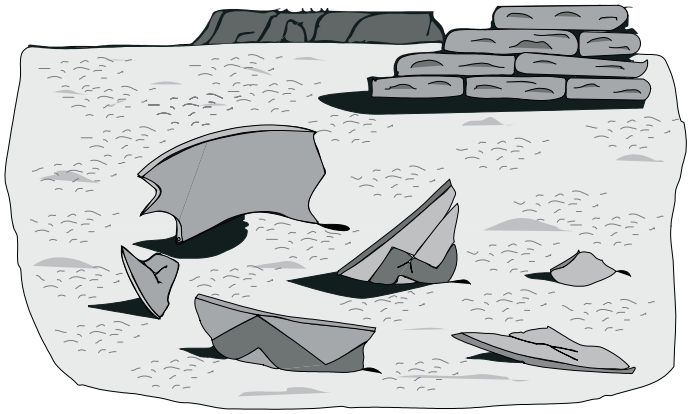
List of Abbreviations

GPRA	Government Performance and Results Act of 1993
GPRAMA	GPRA Modernization Act of 2010
OPA	Online Performance Appendix that includes the annual performance plan and the annual performance report
CJ	Congressional Justification is the presidential budget request for a federal agency
CRS	Clinical Reporting System, one of over 50 software applications within the Resource and Patient Management System (RPMS) used by the Indian Health Service
FY	Fiscal year
PART	Program Assessment Rating Tool established by President George W. Bush

Resources

GPRA Modernization Act of 2010, Public Law 111-352-January 4, 2011 *http://www.gpo.gov/fdsys/pkg/PLAW-111publ352/pdf/PLAW-111publ352.pdf*.

Government Performance and Results Act of 1993 (GPRA), Pub. L. No. 103-62, 107 Stat. 285 (codified as amended in scattered sections of 5 U.S.C., 31 U.S.C., and 39 U.S.C.). *http://history.nih.gov/research/downloads/PL103-62.pdf.*



Help Us Save Money

The federal government is always exploring ways to reduce costs. One recent initiative is an effort to reduce printing expenses. As our readers know, last year we made a transition from an every month print version of *The Provider* to a quarterly print version, thus saving both printing and mailing costs. About 5000 readers have paper subscriptions.

Although we made this change in the printing schedule, we continued to post the monthly edition of our journal to the CSC website. Currently, about 900 individuals are subscribers to the listserv that notifies them when each monthly issue is posted, and lists the contents of that issue. It is unknown how many readers simply access the website on a periodic basis without relying on the listserv for reminders that the monthly issue is available. It is also unknown how many individuals subscribe to both the print version and the listserv.

As one contribution to the effort to minimize costs, we would suggest to our readers the following: 1) if you have a paper subscription and are no longer using it, or if you know of someone who has left your facility but is still receiving the paper edition, please contact *Cheryl.Begay@ihs.gov* in our office to let her know that these subscriptions can be stopped; 2) if you have both a paper subscription and access to the on-line version, and it makes little difference to you which version you use, you may want to consider stopping the paper version and use the one on-line; and 3) if you are using the on-line version and are not on the listserv, you may want to join (go to *http://www.ihs.gov/provider/index.cfm?module=listserv*), as this provides us with more accurate data about readership.

Our goal is to reach as many readers in Indian Country as possible, using the format that is most useful to each individual. Beyond that, we would like to do whatever we can to reduce our expenses.

Please let us know if you have any questions or suggestions.

Electronic Subscription Available

You can subscribe to *The Provider* electronically. Any reader can now request that he or she be notified by e-mail when the latest issue of *The Provider* is available on the Internet. To start your electronic subscription, simply go to *The Provider* website (*http://www.ihs.gov/Provider*). Click on the "subscribe" link; note that the e-mail address from which you are sending this is the e-mail address to which the electronic notifications will be sent. Do not type anything in the subject or message boxes; simply click on "send." You will receive an e-mail from LISTSERV.IHS.GOV; open this message and follow the instruction to click on the link indicated. You will receive a second e-mail from LISTSERV.IHS.GOV confirming you are subscribed to *The Provider* listserv.

If you also want to discontinue your hard copy subscription of the newsletter, please contact us by e-mail at *the.provider@ihs.gov*. Your name will be flagged telling us not to send a hard copy to you. Since the same list is used to send other vital information to you, you will not be dropped from our mailing list. You may reactivate your hard copy subscription at any time.

Colorectal Cancer Screening Activities in Indian Country: An Update

Donald Haverkamp, MPH, and David Espey, MD, both with the Division of Cancer Prevention and Control, Centers for Disease Control and Prevention, assigned to the Division of Epidemiology and Disease Prevention, Indian Health Service, Albuquerque, New Mexico

Colorectal cancer (CRC) remains a leading cause of cancer incidence and mortality for American Indian and Alaska Native (AI/AN) men and women. An estimated 4.0% of all AI/AN (1 in 25) will develop CRC in their lifetime, and 1.9% of all AI/AN (1 in 54) will die from this disease.[1] From 1998–2007, CRC incidence and mortality rates decreased among men and women in all population groups, but the average annual percent decrease in these rates was smaller for AI/AN than for all races/ethnicities combined.[2] Continuation of this trend could lead to greater CRC rate disparity, at a time when AI/ANs in Alaska and the Northern and Southern Plains regions of the country already experience significantly higher CRC incidence rates than non-Hispanic whites.[3]

The United States Preventive Services Task Force recommends routine CRC screening for average-risk men and women, ages 50–75, using annual high-sensitivity, guaiac-based fecal occult blood tests (gFOBT) and immunochemical fecal occult blood tests (iFOBT); flexible sigmoidoscopy every five years combined with high-sensitivity fecal occult blood testing every three years; or colonoscopy every ten years.[4] All of these screening modalities can detect CRC at an early, more curable stage, and in the case of colonoscopy, can even prevent incident CRCs by removal of adenomatous polyps discovered during screening.

Since 2006, when a baseline screening prevalence of 22% was reported for the Government Performance and Results Act CRC screening measure, the percentage of eligible IHS patients considered to be up to date with CRC screening has increased each year, to 41.7% in 2011. Despite evidence of screening effectiveness, the percentage of IHS patients being screened for CRC remains low compared to the US population as a whole, and is lower than the percentage of IHS patients currently being screened for breast cancer (49.8%) and cervical cancer (58.1%). Alaska Area (58.5%) and Oklahoma Area (53.4%) had the highest CRC screening rates in 2011, and are poised to reach the Healthy People 2020 screening objective of 70.5%.

In 2008, the IHS Colorectal Cancer Screening Task Force established four priority areas to increase screening: 1) provider education, 2) public education and awareness, 3) policy development, and 4) screening capacity. This article provides an update on the progress of projects that address each of these priority areas.

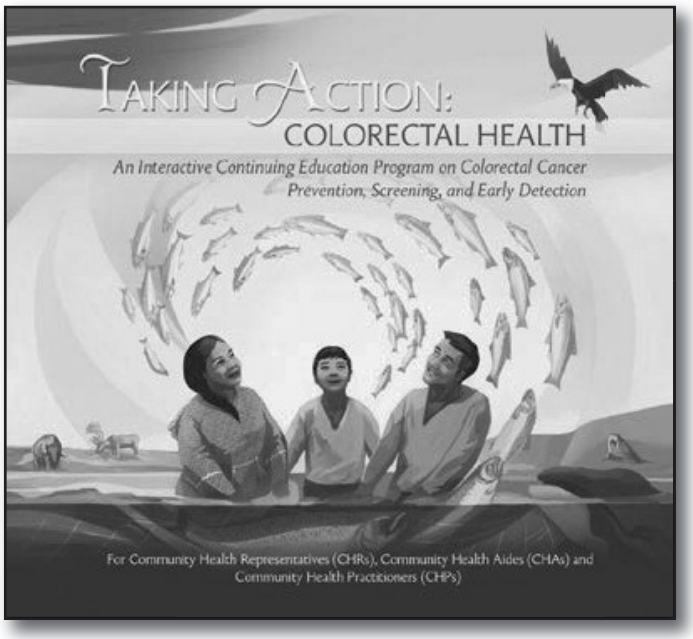
Provider Education

A number of resources that provide culturally appropriate CRC screening information are now available to IHS and tribal health care personnel, including physicians, nurses, community health representatives, and others who inform patients about preventive health services.

An interactive, continuing education CD-ROM "Taking Action: Colorectal Health," on CRC prevention, screening, and early detection, is now available and being distributed to Community Health Aides/Practitioners (CHA/Ps) in Alaska and Community Health Representatives (CHRs) nationwide (Figure 1). Continuing education credit is available to those who successfully complete the quiz at the end of the CD-ROM. To get a copy of the CD-ROM, contact Melany Cueva at *mcueva@anthc.org*.

The American Indian Cancer Foundation, through a

Figure 1. Cover of CD-ROM "Taking Action: Colorectal Health"



contract with IHS, is incorporating provider CRC education sessions as a component of "Improving Northern Plains American Indian Colorectal Cancer Screening (INPACS)," a project that conducts CRC screening assessments at facilities throughout the Northern Plains.

An Open Door Forum on CRC screening was held on June 2, 2010. During this forum, presenters from Forest County Potawatomi, Tuba City, and Warm Springs shared strategies being used to increase colorectal cancer screening rates at their facilities. This session was recorded and can be viewed at the IHS WebEx site at *https://ihs-hhs.webex.com/mw0306ld/mywebex/default.do?siteurl=ihs-hhs&service=7*.

The IHS colorectal cancer listserv is available to disseminate information and recently published articles on CRC screening, policy, screening program implementation systems, etc. To subscribe to this listserv, go to *http://www.ihs.gov/listserver/index.cfm?module=signUpForm&list_id=138*.

Public Education and Awareness

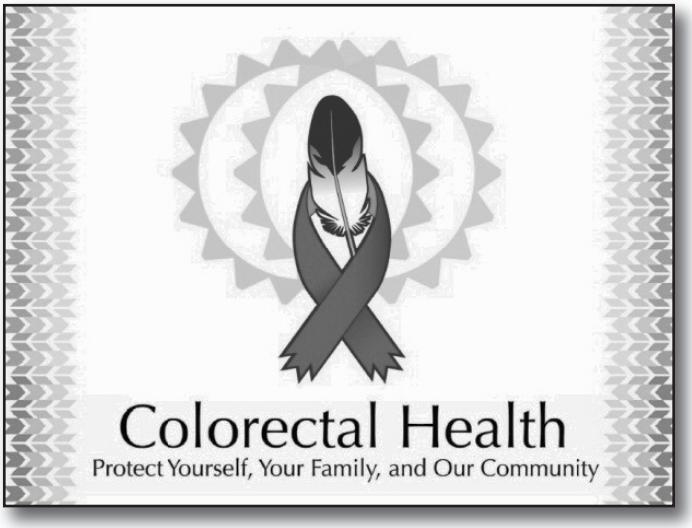
Lack of awareness about CRC in Indian Country is an important issue that is being addressed. "What's the Big Deal?," a 25-minute Readers' Theatre script about CRC screening barriers, was developed by the Alaska Native Tribal Health Consortium (ANTHC) Colorectal Cancer Screening Health Communications Project as a resource for Community Health Workers and community members, to provide CRC screening information, model ways to talk about CRC screening, and increase comfort with talking about this topic. Readers' Theatre integrates oral tradition, language, and culture into a dynamic story that engages participants in an active process of reading and listening.[5] The product has been published through *CES4Health.info* and can be downloaded at *http://www.ces4health.info/find-products/view-product.aspx?code=RLK82JKB*.

This Readers' Theatre script was also turned into a seven-part, telenovela style movie, also called "What's the Big Deal," developed with funding from the Arctic Slope Native Association Screening for Life Program. View this movie, filmed in Alaska with AI/AN actors, at *http://www.youtube.com/watch?v=2DPgnirW5M*.

Colorectal cancer information is now part of the five-day Path to Understanding Cancer Course, which is specifically designed for, and with, Alaska's Community Health Workers. Recently, digital storytelling was added to the cancer education course, and participants create their own two- to three-minute health message to share within their communities. With storyteller permission, digital stories are posted on the newly created ANTHC Digital Stories website at *www.youtube.com/ANTHCDigitalStories*.

The Tribal Colorectal Health Education and Patient Navigation project was initiated to strengthen the capacity of Community Health Representatives (CHRs) to provide colorectal health education, outreach, and patient navigation services in the tribal communities they serve (Figure 2). This project, which began three years ago, with involvement from CHRs from seven Albuquerque Area Indian Health Board consortium tribes, has sparked so much interest that the model is being spread to other parts of the country. Regional workshops for CHRs have taken place in Wind River, Wyoming, Oklahoma Area, Billings Area, and Tucson Area, and more are scheduled in 2012, including Portland Area, Phoenix Area, and Navajo Nation. As a component of the project, work with multidisciplinary task force groups in each participating tribe in the Albuquerque Area continues to strengthen local CRC health education/patient navigation initiatives. The CHRs involved with this project have produced various materials, including PSAs, digital stories, and a flipchart that can be used to foster community awareness.

Figure 2. Tribal Colorectal Health Education and Patient Navigation project logo



The Alaska CRC Screening Patient Navigator Demonstration Project was implemented for a year to coordinate patient outreach, recruiting, scheduling, tracking, and follow-up for CRC screening. During implementation of this project, the participating regional tribal health organization identified significant health care system level barriers that reduced the effectiveness of the CRC screening patient navigator. This resulted in the development of a streamlined medical protocol for colonoscopy referrals, as well as a provider training program to create awareness of the specific medical clearance requirements for CRC screening at the organization.

A first-degree relative database has been maintained in Alaska since 2007 for the purpose of conducting outreach to first-degree relatives of Alaska Native CRC patients, who are at increased risk of developing CRC. Over 200 first-degree relatives have been screened for CRC as a result of this outreach project.

Policy Development

Several regional CRC summits have convened tribal, clinical, and public health partners to discuss ways to increase CRC screening and awareness. The first summit took place in Rapid City, South Dakota in October 2009. During this Aberdeen Area summit, participants began laying the groundwork for a regional AI/AN application in anticipation of future CRC funding opportunities. In September 2010, a Billings Area summit was held in Great Falls, Montana, and as a result of this meeting, a cancer task force was developed that brings people and organizations together to work on training, grant proposals, and resource sharing. A third summit was held for the Portland Area in October 2011 in Portland, Oregon. All of these CRC summits were attended by federal, state, tribal, and urban Indian representatives from the states in these Areas.

In Alaska, the Fecal Immunochemical Test (FIT) study is nearing conclusion. This is the first study to assess the performance of an immunochemical fecal occult blood test (iFOBT) in Alaska Native populations. Guaiac-based FOBTs (gFOBT) are not utilized for CRC screening by most providers serving Alaska Natives due to the higher than expected false positive FOBT results, likely related to a high prevalence in this population of chronic *Helicobacter pylori* infection and associated low grade gastric bleeding. Findings from this study will help determine if iFOBT is a suitable CRC screening alternative for Alaska Native people.

IHS Patient Education Protocols and Codes (PEPC) are used to standardize the provision and documentation of patient education. PEPC for CRC screening were developed and are now included in the PEPC manual under Men's Health (MH-CRC) and Women's Health (WH-CRC); go to *http://www.ihs.gov/healthed/index.cfm?module=pepc*. Through documentation of CRC education, it may be possible to measure the impact of CRC education delivery on CRC screening uptake.

Screening Capacity

The Alaska Native Epidemiology Center, in collaboration with the Department of Surgery at the Alaska Native Medical Center, continues to send itinerant endoscopy teams to regional tribal health facilities in Alaska to provide screening colonoscopies, prioritizing patients who have never been screened and those with a family history of CRC. Since initiating this project in 2007, nearly 300 Alaska Native people have been screened with colonoscopy at three rural sites.

The American Indian Cancer Foundation, through a contract with IHS, is implementing a project called "Improving Northern Plains American Indian Colorectal Cancer Screening (INPACS)," which conducts onsite assessments of the capacity of Northern Plains tribal health system facilities to conduct CRC screening. A total of 54 facilities from Bemidji, Aberdeen, and Billings Areas have expressed interest in the project, and to date, assessments have been completed at 15 of these sites. As part of this project, an endoscopic capacity survey of participating facility referral sites will also be conducted. INPACS has the potential to develop into a mini-collaborative with the IHS Improving Patient Care (IPC) program, to improve clinical service delivery.

All of these projects have been supported, at least in part, through an inter-agency agreement between IHS and CDC, with funding from the CDC's Division of Cancer Prevention and Control. The momentum and enthusiasm generated by these efforts have the potential to scale up CRC screening among AI/AN, ultimately decreasing the burden of colorectal cancer in Indian Country.

If you have questions or would like more information, please contact Donald Haverkamp at *donald.haverkamp@ihs.gov*.

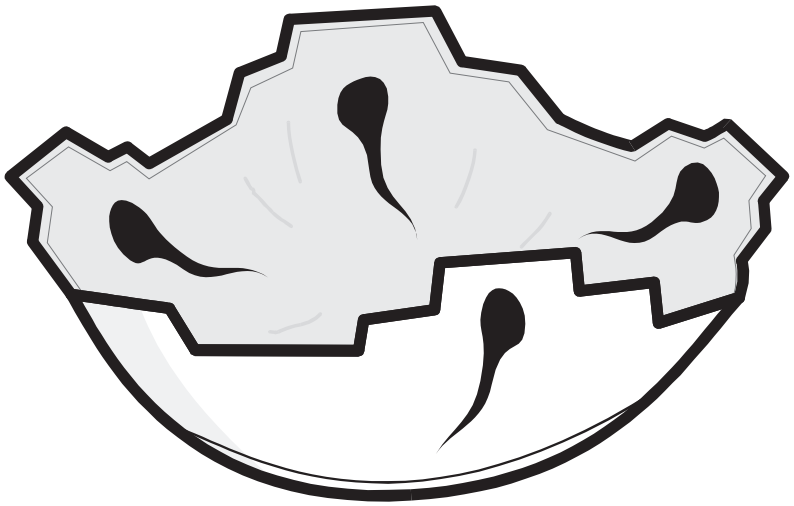
References

1. Surveillance Epidemiology and End Results (SEER) Program (www.seer.cancer.gov) DevCan database: "SEER 17 Incidence and Mortality, 2000–2008, with Kaposi Sarcoma and Mesothelioma." National Cancer Institute, DCCPS, Surveillance Research Program, Cancer Statistics Branch, released November 2011, based on the November 2010 submission. Underlying mortality data provided by NCHS (*www.cdc.gov/nchs*).
2. Kohler BA, Ward E, McCarthy BJ, et al. Annual report to the nation on the status of cancer, 1975–2007, featuring tumors of the brain and other nervous system. *J Natl Cancer Inst*. May 4 2011;103(9):714-736.
3. Perdue DG, Perkins C, Jackson-Thompson J, et al. Regional differences in colorectal cancer incidence, stage, and subsite among American Indians and Alaska Natives, 1999–2004. *Cancer*. Sep 1 2008;113(5 Suppl):1179-1190.
4. US Preventive Services Task Force. Screening for Colorectal Cancer: US Preventive Services Task Force Recommendation Statement. *Ann Intern Med*. November 4, 2008 2008;149(9):627-637.
5. Cueva M, Dignan M, Kuhnley R. Readers' Theatre: A Communication Tool for Colorectal Cancer Screening. *J Cancer Educ*. Dec 3 2011.

Colorectal Cancer Awareness Month

March is National Colorectal Cancer Awareness Month. As you can read on the website of the Centers for Disease Control and Prevention (CDC), "Among cancers that affect both men and women, *colorectal cancer* (cancer of the colon or rectum) is the second leading cause of cancer deaths in the United States. Every year, more than 140,000 Americans are diagnosed with colorectal cancer, and more than 50,000 people die from it." What is more, "Colorectal cancer screening saves lives. If everyone who is 50 years old or older were screened regularly, as many as 60% of deaths from this cancer could be avoided."

For more information, go to *http://www.cdc.gov/Features/ColorectalAwareness/*.



Advancements in Diabetes Seminars

Join us monthly for a series of one-hour live WebEx seminars for health care professionals who work with patients who have diabetes or are at risk for diabetes.

- Seminars are generally held at 1:00 pm Mountain Time.
- 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 care for people with diabetes.
- No cost CME/CE credit is available for every seminar. Accredited Sponsors: IHS Clinical Support Center, the IHS Nutrition and Dietetics Training Program, and the IHS Division of Oral Health.
- Registration for each of the seminars starts approximately two weeks prior to the seminar and goes all the way up until the start of the seminar. Registration and seminar information, including handouts, is available via the following link: *http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=trainingSeminars*
- Upcoming seminars include:
  - January 25, 2012 @ 1:00 pm MST: Update on Diabetes and Nutrition, by Brenda Broussard, MPH, MBA, RD, CDE, BC-ADM.
  - February 22, 2012 @ 1:00 pm MST: Periodontitis and Diabetes, by G. Todd Smith, DDS, MDS.

Web-Based Diabetes Trainings

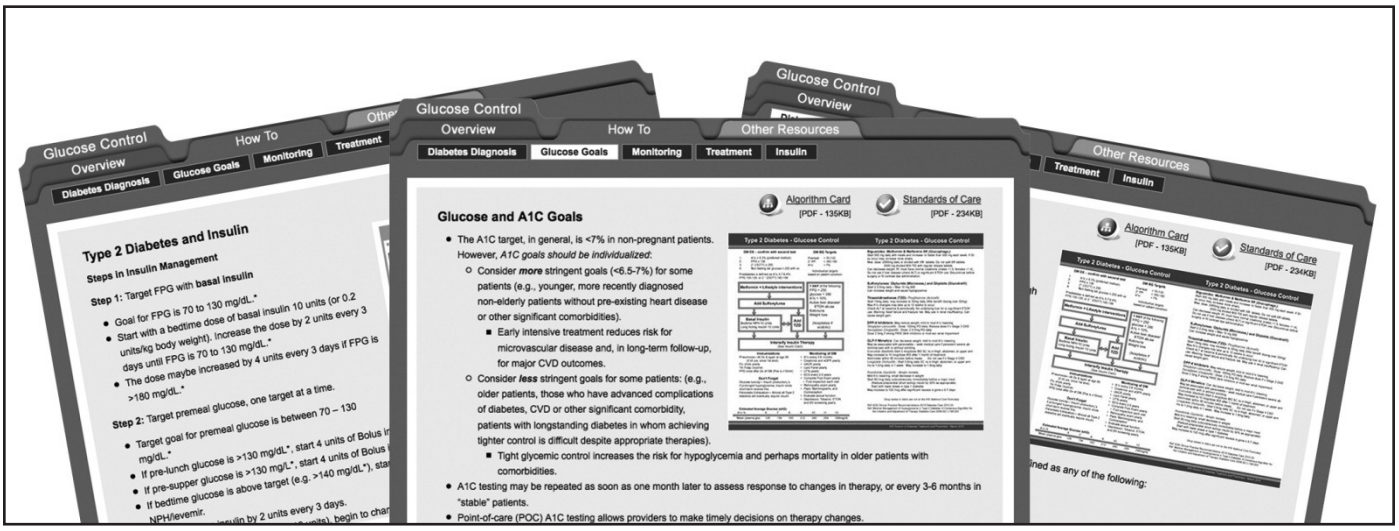
CME/CE trainings, available 24/7 at no cost. Some of these trainings, based on the live WebEx seminars, include:

- Preventing Amputations, by Greg Caputo, MD (new)
- Diabetes Standards of Care and Treatment Targets, by David Kendall, MD (new)
- Chronic Kidney Disease Screening, by Ann Bullock, MD
- Chronic Kidney Disease Management, by Andy Narva, MD
- Chronic Kidney Disease Nutrition, by Theresa Kuracina, MS, RD, CDE
- Physical Activity and Cardiovascular Risk Reduction, by Ralph LaForge, MSc, Exercise Physiologist
- Prenatal and Early Life Risk Factors, by Ann Bullock, MD
- Diabetes Foot Care, by Stephen Rith Najarian, MD
- Obstructive Sleep Apnea: New Links to Diabetes and Home Sleep Testing, by Kelly Acton, MD, MPH, FACP, and Teresa Green, MD

These trainings and others are located at: *http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=trainingWebBased*

Quick Cards

Also, check out training related clinical tools; Quick Guide Cards are available at: *http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsQuickGuides&nav=99*



Evaluation of Health Literacy Assessment Tools Among American Indian Patients

Christopher Lamer, PharmD, MHS, BCPS, CDE, Office of Information Technology, Nashville, Tennessee; Mary Wachacha, BS, Lead Consultant, Health Education Program, Rockville, Maryland; Christy Duke, MPH, Department of Epidemiology, United South and Eastern Tribes, Inc. Epidemiologist, United South and Eastern Tribes, Inc, Nashville

Background

Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.[1] Inadequate or low health literacy has been linked to adverse health outcomes such as less understanding and less use of preventive services, and higher rates of hospitalization.[2,3] According to the Institute of Medicine, the 1992 National Adult Literacy Survey[4] findings indicate approximately 90 million adults may not have adequate health literacy and skills that are required to effectively use the health care system. Some populations of people have been identified as being more likely to have low health literacy[5,6,7] including:

- Adults over the age of 65 years
- Racial and ethnic groups other than White
- Recent refugees and immigrants
- People with less than a high school degree or GED
- People with incomes at or below the poverty level
- Non-native speakers of English
- People with compromised health status (presence of at least one chronic disease)

There is no "gold standard" for measuring health literacy,[8,9] however, a number of assessment tools have been created to assist in the identification of adequate or low health literacy.[10,11,12,13,14] These assessment tools include those that evaluate word recognition (Rapid Estimate of Adult Literacy in Medicine (REALM), Wide Range Achievement Test (WRAT)); those that evaluate reading comprehension (Test of Functional Health Literacy in Adults (TOFHLA)); those that incorporate numeracy (Newest Vital Sign (NVS)); those that target specific question pertaining to the patient's ability to navigate the health care system; and others. Despite this variety of assessment tools, none of these tests capture the complexity of health literacy, but they can provide information and insight about health literacy needs, especially when coupled with observation for low health literacy cues.[15] In the IHS Resource and Patient Management System (RPMS) Electronic Health Record (EHR,) low health literacy can be documented in the patient's medical record under the Barriers to Learning health factors (see Figure 1).

The American Medical Association has recommended that future research be conducted on the evaluation of health literacy screening.[16] The purpose of this project is to compare three short screening tools for assessing normal or low heath literacy among American Indians and Alaska Natives. Use of an appropriate and standardized tool to assess health literacy will enable clinicians to better understand the health literacy level of their patients. Providers can then tailor their discussions to meet the needs of the patient. Knowledge of health literacy levels can also assist in the development and dissemination of appropriate health education materials to improve patient-centered care.

The IHS Health Education Program implemented a survey of 600 American Indian patients to determine if there was a single health literacy tool to assess a patient's health literacy level. Three recognised Health Literacy tools, the Rapid Estimate of Adult Literacy in Medicine (REALM), Newest Vital Sign (NVS), and a brief questionnaire were administered to each of the voluntary participants.

Rapid Estimate of Adult Literacy in Medicine. The REALM is a medical-word recognition and pronunciation test comprising 66 medical terms, arranged in order of complexity by the number of syllables and pronunciation difficulty (see Figure 2). Patients read down the list, pronouncing aloud as many words as they can while the examiner scores the number of words pronounced correctly using standard dictionary

Figure 1. Low Health Literacy Health Factor Documentation in the RPMS-Electronic Health Record

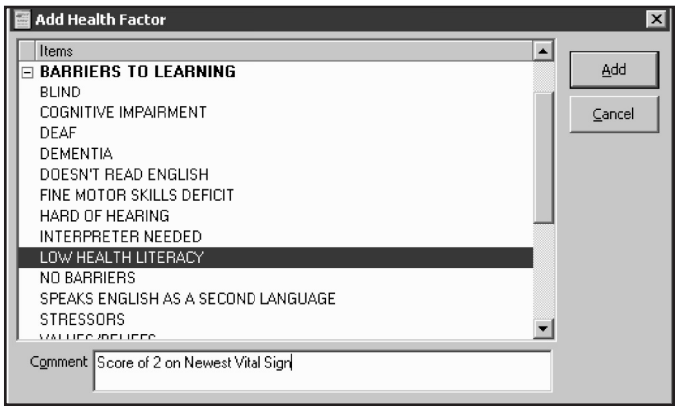


Figure 2. Rapid Estimate of Adult Literacy in Medicine

REALM

Ask the participant to read all of the words on the page starting in column one.

Mark one of the following after each word:

(/) after each mispronounced word
(-) after each word not attempted
(+) after each word pronounced correctly

List One	List Two	List 3
1. Fat _____	1. Fatigue _____	1. Allergic _____
2. Flu _____	2. Pelvic _____	2. Menstrual _____
3. Pill _____	3. Jaundice _____	3. Testicle _____
4. Dose _____	4. Infection _____	4. Colitis _____
5. Eye _____	5. Exercise _____	5. Emergency _____
6. Stress _____	6. Behavior _____	6. Medication _____
7. Smear _____	7. Prescription _____	7. Occupation _____
8. Nerves _____	8. Notify _____	8. Sexually _____
9. Germs _____	9. Gallbladder _____	9. Alcoholism _____
10. Meals _____	10. Calories _____	10. Irritation _____
11. Disease _____	11. Depression _____	11. Constipation _____
12. Cancer _____	12. Miscarriage _____	12. Gonorrhea _____
13. Caffeine _____	13. Pregnancy _____	13. Inflammatory _____
14. Attack _____	14. Arthritis _____	14. Diabetes _____
15. Kidney _____	15. Nutrition _____	15. Hepatitis _____
16. Hormones _____	16. Menopause _____	16. Antibiotics _____
17. Herpes _____	17. Appendix _____	17. Diagnosis _____
18. Seizure _____	18. Abnormal _____	18. Potassium _____
19. Bowel _____	19. Syphilis _____	19. Anemia _____
20. Asthma _____	20. Hemorrhoids _____	20. Obesity _____
21. Rectal _____	21. Nausea _____	21. Osteoporosis _____
Number of correct word for list one: _____	Number of correct word for list two: _____	Number of correct word for list three: _____

pronunciation as the scoring standard. Scores on the REALM vary from 0 (no words pronounced correctly) to 66 (all words pronounced correctly.) A score of 44 or lower is predictive of low health literacy, and a score of 45 or greater predictive of adequate health literacy. The REALM takes approximately two minutes to administer and score. At the time of the initial research, the REALM was being considered a potential gold standard for assessing health literacy in the clinic setting.

Newest Vital Sign (reading a nutrition label). The Newest Vital Sign uses an ice cream label to assess the patient's ability to answer six questions pertaining to the food label (see Figure 3). This assessment requires the patient to remember numbers and make mathematical calculations, identify and be mindful of different ingredients that could be potentially harmful to them, and make decisions about their actions based on the given information. The NVS takes approximately three minutes to administer and score.

Brief Questionnaire. In 1998, Dr. Chew and colleagues, (Chew 2004), compared the ability to screen for health literacy using either a sixteen item questionnaire or the Short Test of Functional Health Literacy (STOFHLA) assessment tool. Of the sixteen questions on the former, three were as follows:

- How often do you have someone help you read hospital materials?
- How confident are you filling out medical forms by yourself?
- How often do you have problems learning about your

Figure 3. Newest Vital Sign (NVS)

Nutrition Facts

Serving Size	½ cup
Servings per container	4
Amount per serving	
Calories 250	Fat Cal 120
	%DV
Total Fat 13g	20%
Sat Fat 9g	40%
Cholesterol 28mg	12%
Sodium 55mg	2%
Total Carbohydrate 30g	12%
Dietary Fiber 2g	
Sugars 23g	
Protein 4g	8%

*Percentage Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Ingredients: Cream, Skim Milk, Liquid Sugar, Water, Egg Yolks, Brown Sugar, Milkfat, Peanut Oil, Sugar, Butter, Salt, Carrageenan, Vanilla Extract.

NEWEST VITAL SIGN

Provide the participant with a copy of the nutrition information handout and ask them the following questions. Mark if they answer the question correctly or incorrectly.

Read this to the participant: This information is on the back of a container of a pint of ice cream.

	Answer Correct? Yes	No
1. If you eat the entire container, how many calories will you eat? **Correct answer = 1,000**		
2. If you are allowed to eat 60 grams of carbohydrates as a snack, how much ice cream could you have? **Correct answer =** 1 cup (or any amount up to 1 cup), Half the container Note: If patient answers "two servings," ask "How much ice cream would that be if you were to measure it into a bowl."		
3. Your doctor advises you to reduce the amount of saturated fat in your diet. You usually have 42 g of saturated fat each day, which includes one serving of ice cream. If you stop eating ice cream, how many grams of saturated fat would you be consuming each day? **Correct answer = 33**		
4. If you usually eat 2500 calories in a day, what percentage of your daily value of calories will you be eating if you eat one serving? **Correct answer = 10%**		
Read this to the participant: Pretend that you are allergic to the following substances: Penicillin, peanuts, latex gloves, and bee stings.		
5. Is it safe for you to eat this ice cream? **Correct answer = No**		
6. (*Ask only if the patient responds "no" to question 5*): Why not? **Correct answer = Beause it has peanut oil**		
Totals		

medical condition because of difficulty understanding written information?

These questions were effective in detecting inadequate health literacy; however, they were less effective assessing marginal health literacy. Another study compared the three questions reported by Chew and colleagues with the REALM assessment tool. This study found that asking one question was effective for detecting limited and marginal health literacy skills in clinic populations:

- How confident are you filling out medical forms by yourself?

Health literacy is recognized as a serious and prevalent health care concern. Numerous tools are available to assess health literacy; however, most tools take too long to be administered by clinicians during daily practice or require additional training on their usage. Shortened assessment tools are available and have been evaluated in the general population. As of the time of this project, these tests had not been validated in American Indian populations.

Methods

Between 2007 and 2008, the Indian Health Service (IHS) received Institutional Review Board (IRB) exemption from five IHS Areas (Aberdeen, Billings, Oklahoma City, Phoenix, and Portland), to conduct an evaluation of three health literacy assessment tools. The purpose of this evaluation was to determine if any of these health literacy assessment tools would enable I/T/U health care providers to identify patients who may be at risk of low health literacy in the busy clinic setting.

American Indians who utilize Indian Health Service facilities for their health care were recruited by health educators at health fairs, in waiting rooms, and during health education visits to participate in the project. Patients were recruited through a non-randomised quota sampling method and were administered the REALM, NVS, and the brief questionnaire. People were excluded if they were under the age of 18, non-English speaking, prisoners, currently hospitalized patients, or cognitively or psychologically impaired as assessed by the health educator.

In addition to collecting the results of the assessment tools, health educators collected demographic information from

Table 1. Participate demographics for those who completed and those who did not complete both health literacy tests, N(%)

Demographic	Variable	Sample (n=600)	Completed Both Health Literacy Tests (n=593)	Non-Completers (n=23)	P-Value
G	M	188 (30.5%)	184 (31.3%)	4 (27.4%)	0.12
	F	428 (69.5%)	409 (69.0%)	19 (82.6%)	
A	18-35	217 (35.2%)	210 (35.4%)	7 (30.4%)	0.58
	36-55	218 (35.4%)	211 (35.6%)	7 (30.4%)	
	56+	181 (29.4%)	172 (29.1%)	9 (39.1%)	
H	<H S	69 (11.2%)	65 (11.0%)	4 (17.4%)	0.59
	H S	283 (45.9%)	274 (46.2%)	9 (39.1%)	
	C /G	264 (42.9%)	254 (42.8%)	10 (43.5%)	
P 1	Y	299 (48.5%)	282 (47.6%)	27 (73.9%)	0.01
	N	317 (51.5%)	311 (52.5%)	6 (26.1%)	
I	P	210 (34.1%)	204 (34.4%)	6 (26.1%)	0.67
	P (M M)	159 (25.8%)	153 (25.8%)	6 (26.1%)	
	N	247 (40.1%)	236 (39.8%)	11 (47.8%)	
S	A	170 (27.6%)	166 (28.0%)	4 (17.4%)	<0.05
	OK	92 (14.9%)	83 (14.0%)	9 (39.1%)	
	NM	109 (17.7%)	106 (17.9%)	3 (13.0%)	
	WO	13 (2.1%)	9 (1.5%)	4 (17.4%)	
	MT	85 (13.8%)	83 (14.0%)	2 (8.7%)	
	ID	61 (9.9%)	60 (10.1%)	1 (4.4%)	
	WA	32 (6.2%)	32(5.4%)	0 (0.0%)	
	ND/SD	54 (8.8%)	54 (9.1%)	0 (0.0%)	

willing volunteers including:

- age
- gender
- education level
- type of insurance (options included Medicare/ Medicaid, private insurance, or no insurance)
- presence of any chronic illness

Data were aggregated and analyzed using Statistical Analysis Software (SAS) version 9.3 by the of the United South and Eastern Tribes, Inc Tribal Epidemiology Center.

Results

The sample population included 600 people, of whom 593 completed both the REALM and NVS health literacy assessments. Most patients completed the brief questionnaire by Chew and colleagues; however, due to an error in wording of one of the questions on the intake forms, the results are not included in the analysis. Demographic information is presented in Table 1.

Rapid Estimate of Adult Literacy in Medicine. Results of the REALM indicate that 95.3% of participants who completed the assessment had a high probability of having adequate health literacy (a score greater than or equal to 45). This approximates a 7th grade or higher grade equivalent. In the evaluation, 4.8% of participants scored less than 45 (4.8%), which approximates a 6th grade or lower grade equivalent. Table 2 lists the results of the REALM assessment. When analyzed with demographic data using multiple logistic regression (see Table 3), patients who had less than a high school education were 2.98 (1.23, 7.21) times more likely to have a low REALM score when compared to those who completed high school, and 6.58 times more likely (2.53, 19.23) than those with a college or graduate degree. There was no statistically significant difference in REALM score among those who completed high school and those who had a college/ graduate degree. Having less than a high school education increased the risk of having a low REALM score.

Newest Vital Sign (reading a nutrition label). Results of

Table 2. Results of the REALM (n=600 participants)

REALM Score	n (%)
LOW (< 45)	29 (4.8%)
ADEQUATE (≥ 45)	571 (95.2%)

Table 3. REALM scores by Participant Demographics

Demographic	Variable	REALM <45, low health literacy (n=29)	REALM 45+, adequate health literacy (n=571)	P-Value
Gender	Male	11 (37.9%)	174 (30.5%)	0.6746
	Female	18 (62.1%)	397 (69.5%)	
Age range	18-35	8 (27.6%)	205 (35.9%)	0.0908
	36-55	6 (20.7%)	205 (35.9%)	
	56+	15 (51.7%)	161 (28.2%)	
Highest level of education completed	<High School	9 (31.0%)	57 (10.0%)	0.0020
	High School	14 (48.3%)	264 (46.2%)	
	College/Graduate	6 (20.7%)	250 (43.8%)	
Presence of at least 1 chronic disease	Yes	18 (62.1%)	270 (47.3%)	0.5811
	No	11 (37.9%)	301 (52.7%)	
Insurance	Private	6 (20.7%)	201 (35.2%)	0.2790
	Public (Medicare or Medicaid)	9 (31.0%)	145 (25.4%)	
	None	14 (48.3%)	225 (39.4%)	
State assessment was administered	AZ	10 (34.5%)	158 (27.7%)	0.8898
	OK	4 (13.8%)	79 (13.8%)	
	NM	3 (10.3%)	104 (18.2%)	
	WO	0 (0.0%)	11 (1.9%)	
	MT	4 (13.8%)	80 (14.0%)	
	ID	5 (17.2%)	56 (9.8%)	
	WA	2 (6.9%)	30 (5.3%)	
	ND/SD	1 (3.5%)	53 (9.3%)	

the NVS were broken down into participants who have a high likelihood of possessing adequate health literacy defined as a score of 4 or greater, participants who have a possibility of limited literacy defined as a score of 2–3, and participants who have a high likelihood (50% or more) of limited literacy defined as a score of 0–1 (see Table 4).

Using multiple logistic regression, generalized logic model (see Table 5), findings show that both the participant's educational level and age group were statistically significant for identifying those at risk of having limited health literacy (a score of 0–1) even after accounting for the effects of educational level.

Odds of limited health literacy. After accounting for the effects of education, those who were in the 18–35 age category were 0.482 (0.275, 0.843) times less likely than those in the 36–55 age category and 0.151 (0.085, 0.268) times less likely than those in the 56 or older age category to have limited health literacy. Those in the 36–55 year old age category were 0.313 (0.184, 0.533) times less likely to have limited health literacy than those in the 56 or older age category.

After accounting for the effects of age, those who had an educational level of less than high school were 6.042 (2.988, 12.216) times more likely to have limited health literacy when compared to those with college/graduate school education. There was no statistically significant difference in the risk of having limited health literacy between the less than high school and high school education groups; however, when compared to the college/graduate education category, those in the high school education category were 3.265 (1.990, 5.356) times more likely to have limited health literacy than those in the college/graduate education category. The odds of having limited health literacy by age and education level are described in Table 5.

Odds of the Possibility of Limited Health Literacy. Even after accounting for the effects of educational level, those who were in the 18–35 age category were 0.355 (0.215, 0.578) times less likely than those in the 56 or older age category to

Table 4. Results of the Newest Vital Sign (n=595)

NVS Score	n (%)
L H L (0-1)	137(23.0%)
P L H L (2-3)	176 (29.6%)
A H L (4-6)	281(47.2%)

Table 5. NVS Results by participant demographics

Demographic	Variable	NVS Limited Health Literacy (n=137)	NVS Possibility of Limited Health Literacy (n=276)	NVS Adequate Health Literacy (n=382)	P-Value
G	M	48 (35.0%)	56 (31.8%)	80 (28.5%)	0.5964
	F	89 (65.0%)	120 (68.2%)	201 (71.5%)	
A	18-35	28 (20.4%)	58 (33.0%)	125 (44.5%)	< 0.0001
	36-55	43 (31.4%)	60 (34.1%)	108 (38.4%)	
	56+	66 (48.2%)	58 (33.0%)	48 (17.1%)	
H	<H S	30 (21.9%)	14 (8.0%)	21 (7.5%)	< 0.0001
	H S	72 (52.6%)	94 (53.4%)	108 (38.4%)	
	C /G	35 (25.6%)	68 (38.6%)	152 (54.1%)	
P	Y	80 (58.4%)	90 (51.1%)	113 (40.2%)	0.6202
1	N	57 (41.6%)	86 (48.9%)	168 (59.8%)	
I	P	39 (28.5%)	53 (30.1%)	113 (40.2%)	< 0.1861
	P (M M)	51 (37.2%)	53 (30.1%)	49 (17.4%)	
	N	47 (34.3%)	70 (39.8%)	119 (42.4%)	
S	A	46 (33.6%)	39 (22.2%)	81 (28.8%)	
	OK	15 (11.0%)	22 (12.5%)	46 (16.4%)	
< 0.0001	NM	19 (13.9%)	27 (15.3%)	60 (21.4%)	
	WO	6 (4.4%)	2 (1.1%)	2 (0.7%)	
	MT	15 (11.0%)	34 (19.3%)	34 (12.1%)	
	ID	21 (15.3%)	26 (14.8%)	13 (4.6%)	
	WA	13 (9.5%)	9 (5.1%)	10 (3.6%)	
	ND/SD	2 (1.5%)	17 (9.7%)	35 (12.5%)	

have the possibility of limited health literacy. There was no statistically significant difference in the risk of having possibility of limited health literacy between the 18–35 and the 36–55 age groups. Those in the 36–55 year old age category were .465 (0.281, 0.767) times less likely to have possibility of limited health literacy than those in the 56 or older age category.

Accounting for the effects of age, those in the high school category were 2.068 (1.376, 3.108) times more likely to have possibility of limited health literacy than those in the college/graduate category. There was no statistically significant difference in the odds of having the possibility of limited health literacy among those in the less than high school education category when compared to those in the high school education category. There was no statistically significant difference in the odds of having possibility of limited health literacy among those in the less than high school education category compared to the college/graduate education category. The reason for this is unknown, but the study was potentially underpowered due to a small sample size. The odds of having the possibility of limited health literacy by age and education level are described in Figures 4 and 5.

Discussion

The purpose of this study was to evaluate three short health literacy assessment tools. Data from the National Assessment of Adult Literacy (NAAL) indicate that a number of factors may be associated with low health literacy; however, this evaluation demonstrated that low health literacy, as assessed by both the REALM and NVS, were significantly associated only with less than high school education.

In the administration the health literacy assessment tools, it became apparent that the single most predictive factor of an American Indian participant's health literacy was whether they had graduated from high school or not. A knowledge of a patient's level of education may serve as an indicator for low health literacy among American Indians seeking care through the IHS. Tactfully asking the patient if they finished high school may provide clinicians with information indicating a risk of having low health literacy; however, future studies are needed to determine the sensitivity and specificity of using educational level as a proxy measure in the American Indian population.

Although education may serve as an indicator for low health literacy, there are many other factors associated with identifying and assessing for adequate health literacy. For this reason, health literacy experts have suggested that the best way to work with patients is to use "Universal Precautions" when dealing with all patients. Universal precautions refers to taking specific actions that minimize risk for everyone when it is

Figure 4. Odds ratios and 95% Confidence Intervals of NVS by Age Group

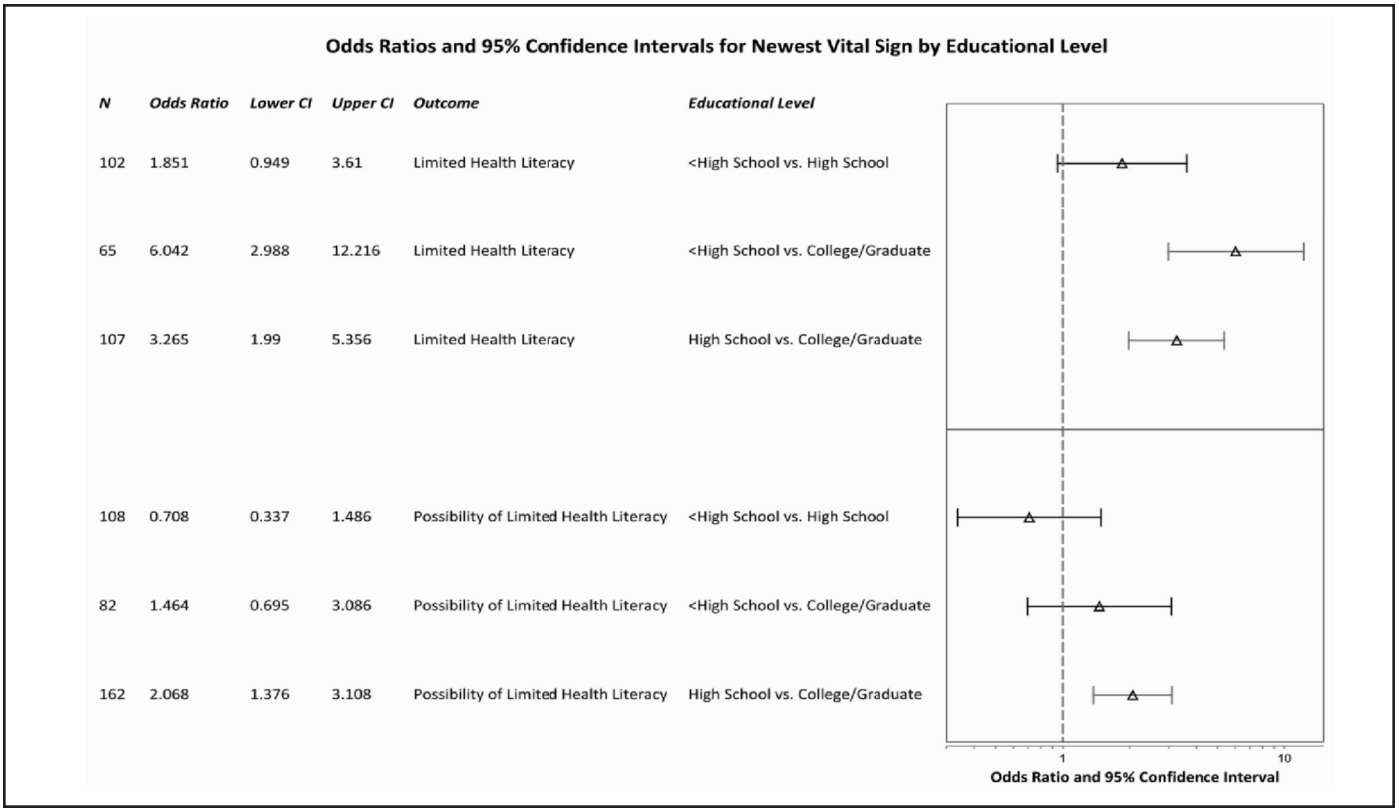
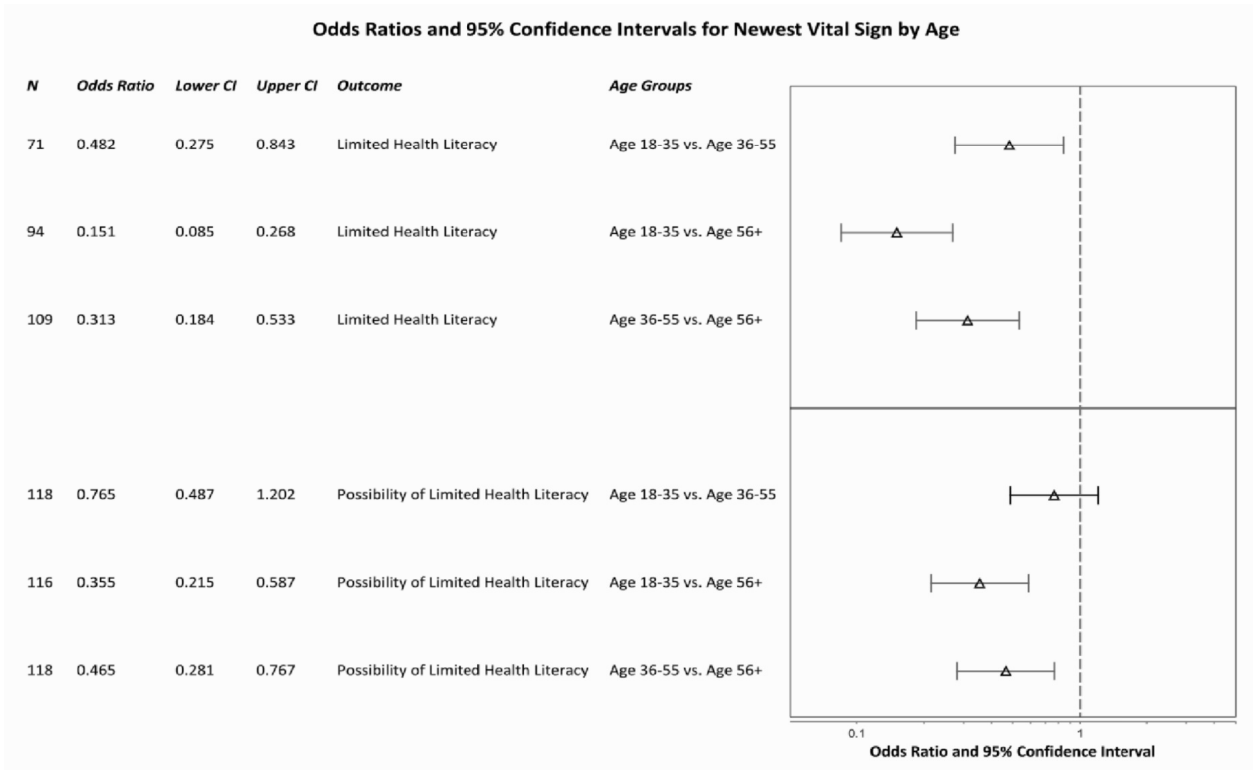


Figure 5. Odds ratios and 95% Confidence Intervals of NVS by Educational Level



unclear which patients may be affected. In simpler words, Health Literacy Universal Precautions are needed because providers do not always know which patients have low health literacy. Universal precaution encourages the provider to assume that every patient might have low health literacy and might require a more sensitive approach to providing health information. Successful communication will provide patients with the ability make appropriate health decisions and improve health outcomes.

Acknowledgements

The authors would like to recognize and thank the many individuals who assisted in the administration of the health literacy assessment tools including Mary Suagee-Beauduy, MPH; Charlotte Alcott; Jim Williams, Med; Shoneen Alexander Ross, MPH; Karole Denise Smith, MPH; Monica Lopez, RD; Ruby Flores; Rebecca Washakie, BS; Stephanie Jay, BS; Jolene Keplin, BS; Donna Lunday St. Claire, BS; Deborah Drumel, MS, RD, CDE; Myra Lefthand, MSW; Sharon Silvas, MPH; Judith Alexander, MSW; Joe Law, BS; Freda Carpitcher, MPH; Vanderbilt University Department of Biostatistics; Larry Layne, Statistician, Division of Epidemiology and Disease Prevention, Indian Health Service; and members of the Area Institutional Review Boards, all of whose hard work and contributions made this article possible.

References

1. Healthy People 2010 Health Literacy Action Plan — Communicating Health: Priorities and Strategies for Progress (2003): *http://odphp.osophs.dhhs.gov/projects/healthcomm*.
2. Institute of Medicine. Report Brief. Health Literacy: A Prescription to End Confusion. Washington, DC: National Academies Pr; 2004 and U.S. Department of Health.
3. Human Services, Office of Disease Prevention and Health Promotion. National Action Plan to Improve Health Literacy. Washington, DC: U.S. Department of Health and Human Services; 2010.
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 (NCES 2006-483). Washington, DC: U.S. Department of Education, National Center For Education Statistics; 2006.
5. IOM Report, Health Literacy: A Prescription to End Confusion (2004): *http://www.iom.edu/report.asp?id=19723*.

6. AHRQ Report—Literacy and Health Outcomes (2004): *http://www.ahrq.gov/clinic/epcsums/litsum.htm.*
7. US Department of Health and Human Services (2010): *http://www.health.gov/communication/hlactionplan/pdf/Health_Literacy_Action_Plan.pdf.*
8. Parker RM, Davis TC, and Williams MV. (1999). Patients with limited health literacy. In Bateman, W. B., Kramer, E. J. and Glassman, K. S. (eds) Patient and Family Education in Managed Care and Beyond. Springer, New York, pp. 63–71.
9. Berkman ND, Sheridan SL, Donahue KE, et al. Low Health Literacy and Health Outcomes: An Updated. Systematic Review (2011) *Ann Intern Med*. 155:97-107.
10. Jastak S, Wilkinson GS. Wide Range Achievement Test—Revised 3. (1993). Wilmington, DE: Jastak Associates; 1993.
11. Davis TC, Michielutte R, Askov EN, et al. (1998). Practical assessment of adult literacy in health care. *Health Educ Behav*. 25, 613–24.
12. Doak C, Doak L, Root J. (1985). Teaching patients with low literacy skills. Philadelphia: Lippincott; 1985.
13. Davis TC, Long SW, Jackson RH, et al. (1993). Rapid estimate of adult literacy in medicine: a shortened screening instrument. *Fam Med*. 25, 391-5.
14. Bass PF, Wilson JF, Griffith JH, (2003). A shortened instrument for literacy screening. *J Gen Intern Med.* 18, 1036–1038.
15. IHS White Paper on Health Literacy (2010): *http://www.ihs.gov/healthcommunications/documents/IHSHealthLiteracyWhitePaper.pdf*.
16. American Medical Association, Council on Scientific Affairs, Ad Hoc Committee on Health Literacy. (1999). Health literacy: report of the Council on Scientific Affairs. *JAMA*. 10, 281, 552-7.

The 16th Annual Elders Issue

The May 2012 issue of *The IHS Provider*, to be published on the occasion of National Older Americans Month, will be the sixteenth annual issue dedicated to our elders. Indian Health Service, tribal, and Urban Program professionals are encouraged to submit articles for this issue on elders and their health and health care. We are also interested in articles written by Indian elders themselves giving their perspective on health and health care issues. Inquiries or submissions can be addressed to the attention of the editor at the address on the back page of this issue.

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

"For there was never yet a philosopher that could endure a toothache patiently."

Shakespeare

Note from the Editor

The 1999 IHS Oral Health Survey showed that 79.7% of children under the age of five years had experienced dental caries. We haven't had another national survey conducted since then, but everyone in the IHS dental field believes that we haven't made significant progress with the problem of Early Childhood Caries (ECC). The disparity in the prevalence of this disease in American Indian/Alaska Native (AI/AN) children is staggering — the prevalence of ECC in the general US population in 2004 was 28%, one third the rate in AI/AN children (*National Health and Nutrition Examination Survey, 2004*).

In July 2009, a select group of dental leaders from across the IHS developed an initiative aimed at preventing ECC. They created a series of goals which include:

1. Overall Goal: Reduce the prevalence of ECC among 0 - 5 year old AI/AN children by 25% by FY 2015.
2. Increase dental access for 0 - 5 year old AI/AN children by 10% in FY 2010 and 50% by FY 2015.
3. Increase the number of children 0 - 5 years old who received a fluoride varnish treatment by 10% in FY 2010 and 25% by FY 2015.
4. Increase the number of sealants among children 0 - 5 years old by 10% in FY 2010 and 25% by 2015.
5. Increase the number of Interim Therapeutic Restorations (ITRs) among children 0 - 5 years old by 10% in FY 2010 and 25% by 2015.

This dental group also put together a program that includes a packet of information for dental and community partners and two online courses. You can find complete information at the following link: *http://www.ihs.gov/doh/documents/ecc/ihsdentalexplorereccinitiative.pdf*.

Infectious Disease Updates

Jennifer Cortes, MD, MPH

Declines in childhood diarrhea-associated health care utilization following rotavirus vaccine introduction

Prior to the February 2006 ACIP recommendation for routine vaccination of US infants with pentavalent rotavirus vaccine (RV5), rotavirus diarrhea caused an estimated 400,000 outpatient visits, 200,000 emergency department (ED) visits, 55,000 hospitalizations, and 20 - 60 deaths annually among US children under five years of age. RV5 vaccine efficacy (VE) from clinical trial data was 98% for the prevention of severe rotavirus disease and 44% for hospitalization for any diarrhea.[1]

In a recent observational study using a large claims database, diarrhea-associated health care utilization for US children under five years of age decreased substantially in each year since vaccine introduction.[1] Declines were most notable for hospitalizations but were also present in ED and outpatient settings. The observed reductions exceeded expectations based on RV5 coverage estimations among US children under five years of age of only 17% in 2008 and 32% in 2009 (Table 1). This finding suggests indirect benefits of vaccine to unvaccinated children. Observed hospitalization costs were more than $150,000,000 less in 2007 - 2008 and nearly $120,000,000 less in 2008 - 2009 than expected costs based on pre-vaccine estimates.

Recent surveillance data for 2010 from the National Enteric and Respiratory Surveillance System (NREVSS) demonstrated sustained decline of rotavirus detection for a third post-vaccine season from 2009 - 2010.[3]

The aforementioned studies demonstrate impressive declines in rotavirus detection and health care utilization for diarrhea disease following RV5 introduction among US children, but the populations studied were not specific to American Indian/Alaska Native children. A recent sub-analysis of American Indian children from RV5 clinical trial data showed that vaccine was 89.5% effective for prevention of G1-G4 rotavirus disease in AI children, similar to the overall study population.[2] Although these results are promising, future study will be needed to assess vaccine effectiveness under real

working conditions among American Indian/Alaska native children.

References

1. Vesikari T, et al. *N Engl J Med*. 2006;354:23-33.
2. Cortes JE, et al. *N Engl J Med*. 2011;365:1108-1117.
3. Tate JE, et al. *Pediatr Inf Disease J*. 2010;30:S30-S34.
4. Grant LR, et al. *Pediatr Infect Dis J* 2012;31:184-188.

Table 1. Reductions in health care utilization for diarrhea among US children <5 years of age, January-June 2008 and 2009*

S	R R (%)	
	2008	2009
H		
R -	75	60
A	47	34
ED	23	6
O	15	8

*A C JE, . *N Engl J Med* 2011;365:1108-1117. R - , J -J 2000-2006.

Recent literature on American Indian/Alaska Native Health

Jeff Powell, MD, MPH

Centers for Disease Control and Prevention. Post neonatal Mortality Among Alaska Native Infants — Alaska, 1989 - 2009. *MMWR*. 2012;61:[1-5].

This month's CHN AI/AN pediatric literature review focuses on the important topic of infant mortality in Alaska (specifically post neonatal mortality). The reference report, published in January 2012 by *MMWR*, describes the difficult challenge of infant mortality in Alaska, and the troubling finding that post neonatal Alaska Native mortality has not declined over the 20 year period 1989 - 2009.

Multiple efforts have been championed to reduce infant mortality throughout Alaska. This report reflects the great difficulty in impacting improvement with these initiatives. It also highlights the importance of ongoing efforts to find potential underlying causes for the high mortality rates of Alaska Native infants. Perhaps characterizing these causes will lead to targeted screening and intervention that will, in future decades, reduce this important disparity.

The authors reviewed records reflecting 821 infant deaths (ages 28 days to 364 days old) out of more than 222,000 live births to Alaska residents. The causes of death, and associated maternal factors, were elicited by review of birth and death records, and by State of Alaska Maternal Infant Mortality Review Committee evaluation. All of these data were compiled and analyzed with logistic regression analyses.

Between 1989 and 2009, post neonatal mortality rates in Alaska are highly variable from year to year. Significant disparities were shown between Alaska, and the rest of the US. This was true both for Non-Native infants (48% higher infant mortality in Alaska), and AI/AN infants (70% higher). Overall, the 20 year period analyzed showed decreased post neonatal infant mortality rates for non-native populations (4.9 per 1000 live births in 1989 compared with 3.9 per 1000 live births in 2009). This reduction was reflected in a single declining slope in incidence after statistical analysis. Sadly, Alaska Native infant mortality did not show a statistically significant decline over the same 20 year period. Rates of Sudden Infant Death Syndrome (SIDS) and Sudden Unexplained Infant Death (SUID) both declined.

Maternal factors associated with post neonatal death were described. Regression models showed that preterm birth, low birth weight, maternal substance/tobacco use, unmarried mother with no father listed on the birth certificate, and low maternal education were all associated with increased risk for sudden death.

The editorial note that follows the report offers additional insights. One important aspect of the effort to characterize and decrease Alaska Native post neonatal mortality is the emerging literature on Carnitine Palmitoyltransferase 1A (CPT1A) Genetic Variant status. CPT1A deficiency is a rare autosomal recessive disorder of fatty acid oxidation that impairs fasting ketogenesis. The genetic variant being examined in Alaska is a partial loss of CPT1A activity, which has unknown implications. In 2010 (*Pediatrics*, Vol 126 pp 945-951), Gessner et al published preliminary findings of a newborn screening analysis for this genetic variant in 616 consecutive AN live births. This effort revealed that 26% of AN newborns have this variant. Further, carriage of the variant allele was found in all cases of infant mortality (and infant death occurred in 5 of the 152 infants homozygous for the allele). All of the cases of infant death were associated with a respiratory infection. While this is a small study that may have limits, it is hoped that this offers an opportunity for further understanding of the historically very high rates of infant mortality in Alaska Native and other circumpolar populations.

Locums Tenens and Job Opportunities

If you have a short or long term opportunity in an IHS, tribal, or urban facility that you'd like for us to publicize (i.e., AAP website or complimentary ad on Ped Jobs, the official AAP on-line job board), please forward the information to *indianhealth@aap.org* or complete the on-line locum tenens form at *http://www.aap.org/nach/locumtenens.htm*.

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*

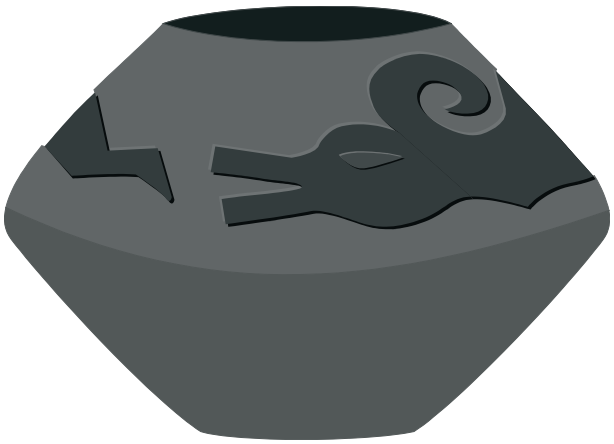
Available EHR Courses

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*.

15th International Congress on Circumpolar Health
August 5 – 10; Fairbanks, Alaska

The International Congress on Circumpolar Health (ICCH) is a primary source of information exchange and scholarly communication relating to circumpolar health. Through the ICCH, the International Union for Circumpolar Health (IUCH) creates a forum for circumpolar health professionals (medical scientists, policy and decision makers, Native peoples, and community leaders) to share the research findings and program successes that are unique to northern regions.

From August 5 - 10, 2012, the IUCH will reassemble for the 15th time in Fairbanks, Alaska, United States. Registration is now open for the Congress; you need not be an IUCH member to attend. Early registration ends on April 1, 2012. To register and learn more about the Congress and IUCH, please visit *http://icch15.com/*.



Patient Billing Coordinators: An Active Approach Yields Big Results for Winnebago

Audrey Parker, Business Office Manager, Winnebago Service Unit, Winnebago, Nebraska; Lisa Suniga, Patient Benefits Coordinator, Winnebago; Lauren Buchanan, Patient Benefits Coordinator, Winnebago; and Brigg Reilley, Division of Epidemiology and Disease Prevention, Albuquerque, New Mexico

While finance is not a provider's first concern, the cost of tests and treatments often has an impact on a community's access to health care. A key figure in a health facility's budget is the Patient Benefits Coordinator (PBC). The PBC ensures that the medical services being provided are billable for eligible patients. This in turn, may enhance the options that a patient has for his/her care and allows the service unit budget to stretch further than what it otherwise might.

The Indian Health Service's Winnebago Service Unit, located in Winnebago, Nebraska, has had a Patient Benefits Coordinator (PBC) Program since 1987 and is currently comprised of two PBC positions. It is no coincidence that this service unit has operated "in the black" for the last decade with the efforts of the two PBCs who have had great success in navigating benefits for their patients.

The Winnebago Service Unit has approximately 11,000 active patients and 21,844 registered patients. It is estimated that fifty-six percent (56%) of the active patients and seventy-four percent (74%) of the registered patients are uninsured. Major third-party billing programs include Medicaid eligible patients (2,832), private insurance patients (2,089), and Medicare eligible patients (961).

The Winnebago PBC program operates much like a highly proactive Public Health Nurse (PHN) program, and has demonstrated a high success rate in external billing. The key components to the success of Winnebago's program are extensive time in the field by the PBCs and their familiarity with all of the available billing options. The PBCs spend fifty percent of their time in the field. Their schedules follow a pattern of one week in the office and then one week in the field. They generally take opposite schedules so that in any given week, a PBC is always available in the office. For uninsured patients, PBCs seek assistance from state programs and federal programs such as Medicare, Medicaid, and Social Security. Alternative options, such as assistance through private patient advocacy foundations, are used as needed. It is worth noting that there are no training programs for PBCs, so learning is strictly on-the-job. It may take some time for a PBC to have full knowledge of the available care options for each patient and how to best approach each option.

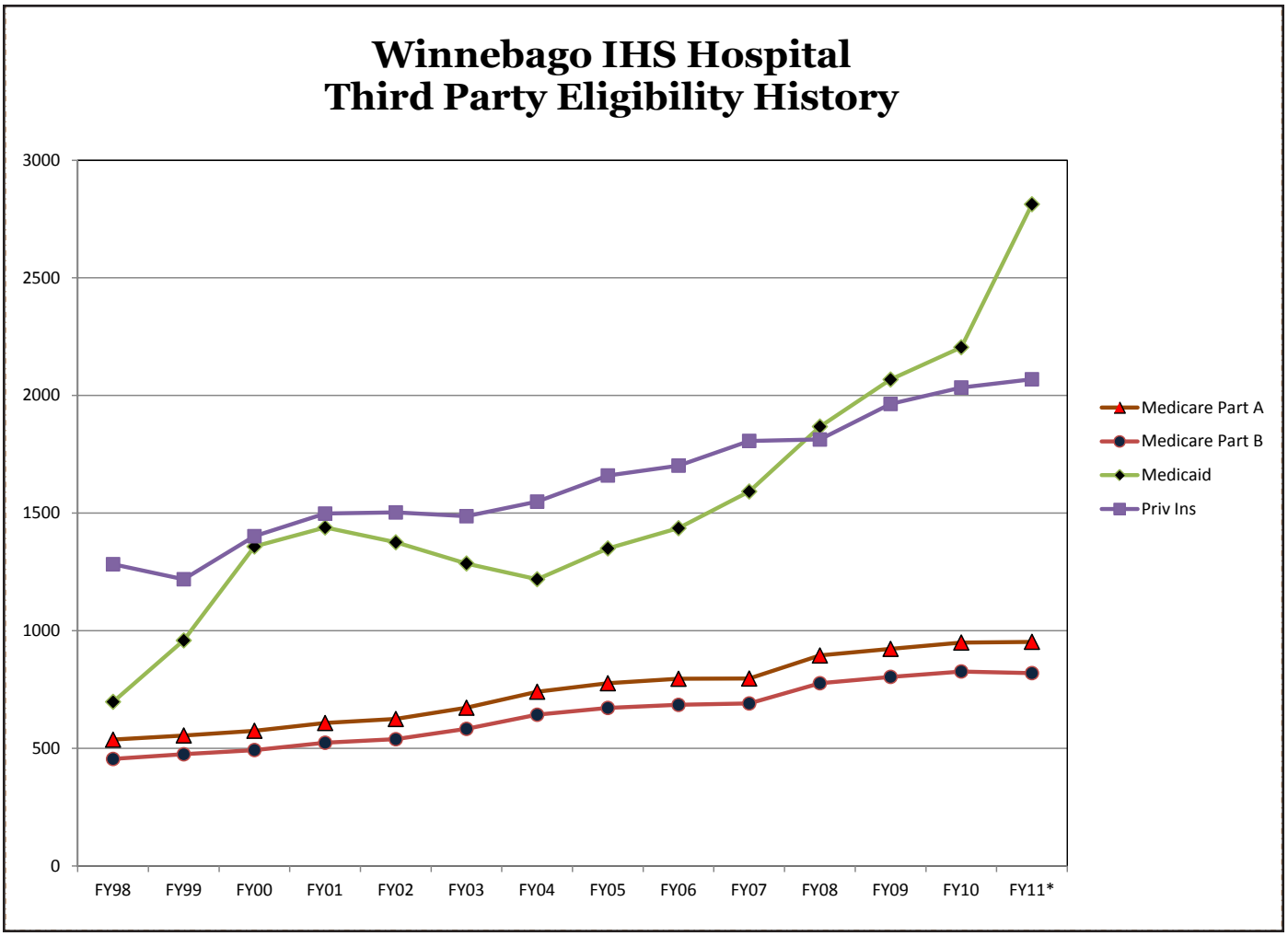
PBCs spend their field time locating potential patients, driving patients to medical visits, assisting with the completion of necessary paperwork, and, attending eligibility interviews. Many of the application procedures have verbiage and logistics that can be a barrier for patients, and the PBC is responsible for navigating the application and qualification process.

Winnebago's emphasis is on patient enrollment, rather than "registration drives." The PBCs actively identify, obtain, and complete third-party billing paperwork for all eligible patients. The PBCs use Visit General Retreival (VGEN) software to generate a monthly report on their patient population to determine which new patients are younger than 19, or which patients had their 64th birthday. These monthly updates allow them to systematically track which patients are eligible for age-based third-party billing, but who are not yet enrolled.

To assist with an application or re-application, PBCs will generally contact patients by mail, phone calls, and home visits as needed for enrollment, or to ensure that a patient makes a scheduled medical appointment. If an eligible patient fails to complete the enrollment process despite repeated attempts made by the PBC to get the patient enrolled, the PBC will provide a warning that Contract Health Service (CHS) dollars will not cover the patient's next medical visit, and costs will be out of pocket, a situation that has become increasingly rare over the last decade. If a patient is eligible for benefits and will not sign up, they are asked to sign a form acknowledging that CHS will not cover their costs. Currently, only one patient has chosen this option due to non-completion of benefits paperwork.

The CHS program closed out FY11 with $126,148 left in the budget. For the prior ten years, the CHS program has always closed out with some carry over dollars — in some years it has been as little as $500, but never in the red. If the PBC program were not as aggressive as it is, the CHS program would be out of money a few months before the end of the fiscal year.

The PBC program is estimated to save the CHS program an average of $200,000 per high-cost patient for whom they are able to obtain third-party coverage. The PBCs obtain coverage for at least 4 - 5 such patients a year, for a savings of approximately $1,000,000 in this small pool of patients alone.



These savings have not gone unnoticed; a former Omaha Tribal Chairman, Mitchell Parker, stated "Because of the PBC willingness to help, I appreciate the assistance they provided to . . . tribal members, and they are a benefit to all who ask assistance. As a result, the Omaha Tribe has established a PBC position because we realize how important this function is in helping to obtain eligibility and saving our CHS dollars. Had the PBC not assisted, it would have created CHEF cases for these patients, which are not funded 100%."

The PBCs at Winnebago have been a consistent team for many years who know their patient community extremely well, have developed trust, and have an extensive knowledge of third-party billing. By actively seeking out eligible patients and doing "whatever it takes" to get them into external billing programs, the PBCs have paid for their positions many times over. The Winnebago PBC program may serve as a model for other facilities that want to improve their external billing and make their budgets go further.

Acknowledgements:

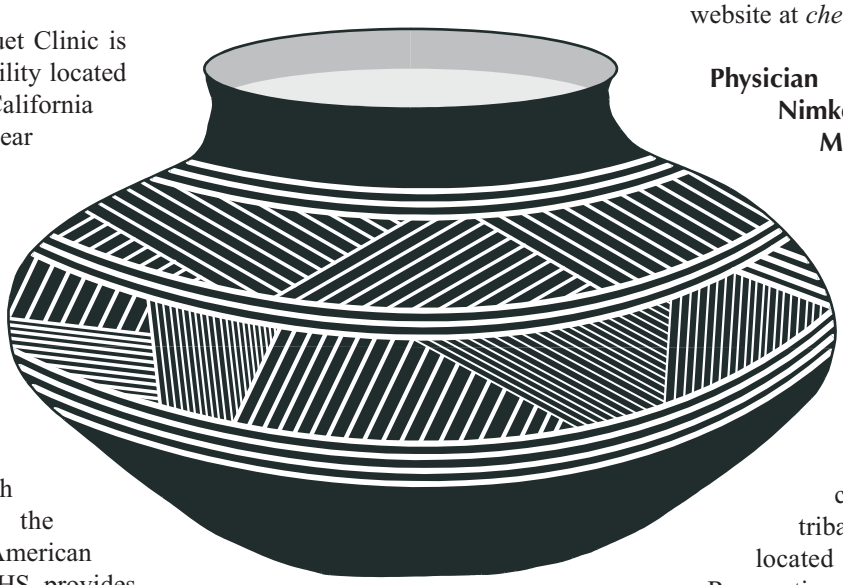
The authors would like to thank Courtney Mallon and Lisa Neel for their contributions.

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.*

Family Practice Physician
Physician Assistant or Family Nurse Practitioner
United Indian Health Services, Inc. (UIHS), Howonquet Clinic; Smith River, California

The UIHS Howonquet Clinic is a premier health care facility located in beautiful northern California along the Pacific coast near the majestic redwoods. The organization is a unique non-profit made up of a consortium of nine tribes, with a mission "To work together with our clients and community to achieve wellness through health services that reflect the traditional values of our American Indian Community." UIHS provides wrap-around services that include medical, dental, behavioral health, and community services. Our focus is to empower our clients to become active participants in their care. If you value outdoor adventures, such as backpacking, kayaking, biking, fishing, and surfing, and you envision yourself providing services to an under-served but deserving community in a caring and holistic manner, come join our team. Please visit our website at www.uihs.org or contact Trudy Adams for more information at (707) 825-4036 or e-mail *Trudy.adams@crihb.net*. (2/12)



Wellness Center Director
Nurse Practitioner
Chehalis Tribal Wellness Center; Oakville, Washington

The Chehalis Tribal Wellness Center provides health services to tribal and community members living on or near the reservation. The Chehalis Tribal Wellness Center is located on the 4,849 acre Chehalis Reservation in southwest Washington State. The Chehalis Reservation is situated approximately 26 miles southwest of Olympia and six miles northwest of Centralia. Services include ambulatory medical services, dental services, women's health, diabetes prevention and treatment, and contract health services. The facility has 12 exam rooms, a triage and trauma area, digital radiology, laboratory services, and a large dental clinic. The Chehalis Tribal Wellness Center is a full-service family practice clinic that has been serving Chehalis tribal members since 1979. If you would like further information about current clinical job opportunities with us, please contact Sylvia Cayenne at (360) 273-5911 or visit our website at *chehalistribe.org*. (2/12)

Physician
Nimkee Memorial Clinic; Mount Pleasant, Michigan

The Saginaw Chippewa Indian Tribe is seeking a full time physician. The Saginaw Chippewa Indian Tribe (SCIT) is a band of Chippewa Indians located in central Michigan. The tribal government offices are located on the Isabella Indian Reservation, near the city of Mount Pleasant. The tribe owns and operates Soaring Eagle Casino in Mount Pleasant. SCIT also holds land on the Saganing reservation near Standish, with a community center in addition to the recently completed Eagle's Landing Casino on the Saganing reservation.

Besides its gaming enterprises, the tribe owns other businesses and community operations, including the Sagamok Shell Station, the Ziibiwing Cultural Society (a tribal museum), a substance abuse facility, a community clinic, and health facilities. Educational programs include the Saginaw

Chippewa Academy (an elementary school), as well as a presence in the local public schools through Native American advocates and tutors. Saginaw Chippewa Tribal College is an accredited two-year college that operates with funding from the tribe.

Nimkee Memorial Clinic is open Monday through Friday from 8 am to 5 pm and is located on the Isabella Reservation. Local hospital services are provided through McLaren Central Hospital. The Nimkee Medical Clinic employs five providers, including two family practice physicians, one internist, a family nurse practitioner and a physician assistant. Nimkee Clinic also includes an on-site pharmacy.

The clients served are members and direct descendants of the SCIT and members of other US federally recognized Indian tribes residing in a five county service area including Isabella, Clare, Midland, Missaukee and Arenac counties. The tribal physician plays an essential part in the comprehensive, quality health care delivered in a holistic approach, to prevent disease and to promote wellness in the Native American community served. Ambulatory care services are provided to people of all ages and include general clinic visits of various levels of care, health promotion and disease prevention, immunization clinics, men's health clinics, women's health clinics, diabetes management, and pharmacy.

Interested applicants may apply for the position and upload a resume and credentials using the website at *www.sagchip.org*. The full job description will be available to view on the website as well. Any questions in regards to this position, please contact Kassy Heard at (989) 775-5605 or *kheard@sagchip.org*. (2/12)

Urgent Care Family Medicine Physician
Northern Navajo Medical Center; Shiprock, New Mexico

The Urgent Care Clinic at Northern Navajo Medical Center in Shiprock, New Mexico has an opening for a BE/BC family medicine physician. Shiprock is located just south of Colorado with close proximity to the Four Corners area and the Rocky Mountains. This is a fast-paced urgent care clinic with over 35,000 patient visits per year. Work with a team of six physicians and nine physicians assistants caring for the Navajo people. The schedule is flexible, there is no call, and the salary is competitive with the addition of IHS Physician Market Pay. Loan repayment is available through IHS and NHSC. If you are interested in learning more about this excellent opportunity please e-mail *nancy.kitson@ihs.gov* and attach your CV. (2/12)

Primary Care Physician
Zuni Comprehensive Community Health Center; Zuni, New Mexico

The Zuni Comprehensive Community Health Center (Zuni-Ramah Service Unit) has openings for full-time primary care physicians starting in fall 2012. This is a family medicine model hospital and clinic providing the full range of primary care, including outpatient continuity clinics, urgent care, emergency care, inpatient (pediatrics and adults) and obstetrics, with community outreach, in a highly collaborative atmosphere. For a small community hospital, we care for a surprisingly broad range of medical issues. Our professional staff includes 17 physicians, two NPs, one CNM, a podiatrist, dentists, a psychiatrist, a psychologist, optometrists, physical therapists, and pharmacists. Our patient population consists of Zunis, Navajos, and others living in the surrounding area.

Zuni Pueblo is one of the oldest continuously inhabited American Indian villages in the US, estimated to be at least 800 - 900 years old. It is located in the northwestern region of New Mexico, along the Arizona border. It is high desert, ranging from 6000 - 7000 feet in elevation, and is surrounded by beautiful sandstone mesas and canyons with scattered sage, juniper, and pinon pine trees. Many of our medical staff have been with us for several years, reflecting the high job and lifestyle satisfaction we enjoy in this community.

For more information, contact John Bettler, MD at (505) 782-7453 (voice mail), (505) 782-4431 (to page) or by e-mail at *john.bettler@ihs.gov*. CVs can be faxed to (505) 782-7405, attn. John Bettler. (1/12)

Family Practice Physician (3)
Family Nurse Practitioner (2)
Emergency Medicine Physician (4)
San Carlos Service Unit; San Carlos, Arizona

San Carlos Service Unit is recruiting for board certified/eligible emergency room and family practice physicians to join our experienced medical staff team. Additionally, we are recruiting for family nurse practitioners. We are located approximately 90 miles east of Phoenix.

The San Carlos Service Unit is the primary source of health care for approximately 13,000 people of the San Carlos Apache Nation. The service unit is a Joint Commission fully accredited eight-bed hospital and outpatient services facility with a satellite clinic. Clinical services include family medicine, pediatrics, internal medicine, prenatal and women's health, dental, optometry, physical therapy, nutrition and dietetics, social work services, and diabetes management education.

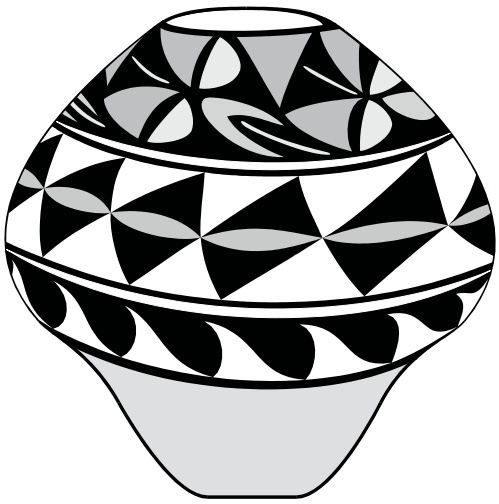
Currently there is a new hospital under construction that is scheduled for completion in the later part of 2013 or early 2014. We offer competitive salary, relocation/recruitment/retention allowance, federal employment benefits package, and loan repayment. For more information, please contact Richard Palmer, MD, SCSU Clinical Director at (928) 475-7201 or by e-mail at *richard.palmer@ihs.gov*. (1/12)

Family Practice Physician
Family Nurse Practitioner
Physician Assistant
Registered Dietician (Renal)
Toiyabe Indian Health Project, Inc.; Bishop, California

Toiyabe Indian Health Project is seeking qualified applicants to fill provider vacancies within the organization. We are looking for highly motivated candidates who are California licensed/Board certified and ready to join our team of providers. We offer competitive pay, an excellent benefits package including health insurance, life insurance, long-term disability insurance, 401k, CME, vacation and sick leave, paid holidays, and relocation assistance. Toiyabe is located in the Eastern Sierra Region of California, with abundant outdoor recreational activities such as hiking, biking, skiing, rock climbing, fishing, camping, etc. There are small communities, safe neighborhoods, and great schools/day care facilities. If interested in applying, please contact Sara M. Vance, Personnel Officer, at (760) 873-8464, ext. 224; e-mail *sara.vance@toiyabe.us*; or visit our website at *www.toiyabe.us* for complete job descriptions and applications. (12/11)

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)



Dept. of Health and Human Services
Indian Health Service
Clinical Support Center
Two Renaissance Square, Suite 780
40 North Central Avenue
Phoenix, Arizona 85004

PRESORTED STANDARD
POSTAGE AND FEES PAID
U.S. DEPT. OF HEALTH & HUMAN SERVICES
PHOENIX, AZ
PERMIT NO. 5691

CHANGE SERVICE REQUESTED

_____

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

Change of Address or Request for New Subscription Form

Name _____ **Job Title** _____

Address _____

City/State/Zip _____

Worksite: ☐ **IHS** ☐ **Tribal** ☐ **Urban Indian** ☐ **Other**

Service Unit (if applicable) _____ **Last Four Digits of SSN** _____

Check one: ☐ **New Subscription** ☐ **Change of address**

If change of address, please include old address, below, or attach address label.

Old Address _____

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).*

Wesley J. Picciotti, MPA .....Director, CSC -
John F. Saari, MD .....Editor -
Cheryl Begay .....Production Assistant -
Theodora R. Bradley, RN, MPH .....Director, OCE -
Linda Trujillo, RN, MSN .....Nursing Consultant -
Erma J. Casuse, CDA .....Dental Assisting Training Coordinator -
Edward J. Stein, PharmD .....Pharmacy Consultant -

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*.