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The Chronic Care Model and Elder Care in the Indian Health System

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With the Chronic Disease Management Initiative (CDMI), the Indian Health Service (IHS) has committed to creating a system of care designed to effectively address chronic disease, in both prevention and treatment.[1] The strategic plan for the CDMI has identified the Chronic Care Model (CCM) as the framework for this effort.[1] The CCM framework identifies six elements to effective care of chronic conditions[2]:

1. Health care organization
2. Community resources
3. Decision support
4. Clinical information systems
5. Delivery system redesign
6. Self-management support

The framework provided by the Chronic Care Model is ideal for the development of services for elders. In this article we will look at how this approach might guide implementation of specialty geriatric services across the Indian health system.

Health Care Organization

The CCM recognizes that the leadership, financing, and organization of a health care system must support quality chronic care.[2] Our aging population places increasing demands on limited IHS resources, but through attention to Medicare reimbursement, we can bring additional resources into the system. New services for the elderly should be designed with Medicare reimbursement in mind. This does not mean that only those services that can be reimbursed should be developed, but that we should maximize reimbursement for all new services. Administrators need to recognize the positive contribution of elder-specific services to the budgetary bottom line and allocate these resources to new service development. Investment in training targeted to developing local expertise in geriatrics is essential, as are compulsive efforts to enroll eligible individuals in Medicare and bill for the services provided.

We can also support local innovation and development of specialty services for the elderly by identifying system-wide standards for care. We have an expectation of what services must be available if high quality diabetes care is going to be possible (e.g., retinal screening, regular foot examination, diabetes education). What services are required if we are to provide high quality care of dementia in the Indian health system? The palliative care guidelines for service discussed by Dr. Crissler elsewhere in this issue address this need for palliative and end-of-life care.

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Community Resources

Our goal should be the integration of community resources for elder wellness and health with clinical services. The Title VI senior center, elderly nutrition, and family caregiver programs are important assets, as are the host of health and wellness programs developed in recent years through the Special Diabetes Grants Initiative and other programs. For example, participation in a community-based exercise program might be an element of a fall prevention intervention for an at-risk elder. Family caregiver support programs can deliver critical patient and family education content. Certainly the controlled, protected environment of an elder day health program is an important asset for management of dementia in the elderly. These community resources will need to be identified and integrated into the clinical care of elders.

Decision Support

The CCM relies on the use of evidence-based processes of care for chronic conditions.[2] These clearly defined pathways provide all members of the health care team with common ground and make optimal care of chronic conditions explicit and measurable. Indian health system experience with diabetes care has demonstrated the power of this approach. We will need to develop or adapt pathways of care specific for geriatric syndromes, such as falls, incontinence, and dementia. The Preventive Care Guidelines for the Elderly and Fall Prevention Guidelines represent a start in that direction.[3,4]

Clinical Information Systems

Enhanced ability to capture, manage, and use patient information through clinical information systems has provided much of the fuel for the increased efficiency and effectiveness of care in the chronic care model. We can ask our information system to develop a registry of high risk elders using data elements that can be passively extracted from RPMS and to provide prompts and reminders to clinicians and elders that will help us achieve goals of care. We need to ensure that we have the appropriate data elements in RPMS (and, as a result, the PCC and the electronic health record) to make this work. In recent years we have added functional status and caregiver status as fields in RPMS. Fall risk screening will soon be available. We also rely on our information system, through the Clinical Reporting System (CRS), to track and provide feedback on clinically important parameters of care. We now have available to us a CRS Elder Care Report that tracks functional status assessment as well as age-specific outcome measures for existing CRS indicators. Fall risk and medication review will soon be added to this report. We will continue to add indicators that help us to provide evidence-based care for the elder.

Delivery System Redesign

Nowhere does the acute care design of the current health system fail so spectacularly as with the elderly. The elder is required to navigate the hospital or clinic to get to a time-pressured visit with a clinician for management decisions that they frequently don't understand. Just getting from the waiting room to the examination room can sometimes take more time than is allotted for the visit. Little of the nature of the elder's function and supports can be understood in that brief visit. Moreover, there is little capacity to monitor multiple chronic conditions between scheduled visits, resulting in late recognition of clinical decompensation and adverse medication effects. We patch together supports with public health nursing, community health representatives, and home health nursing, often without the infrastructure of common clinical assessment tools, shared records, and organized communication that quality chronic care requires. Elsewhere in these pages Domer, et al describe an evolving elder care program at Fort Defiance Indian Hospital. This program identifies at-risk elders and implements a pre-planned system of care that bridges home and clinic and provides an infrastructure for coordinated care beyond the episodic visit. Elderly nutrition and senior centers offer the possibility of alternative sites for the delivery of education and clinical care. Innovative approaches using telehealth technologies offer further promise for true chronic care for chronic conditions of the elderly.

Self Management Support

A hallmark of effective care of chronic conditions is the informed, activated patient, engaged in setting health goals, empowered in self-management, and proactively navigating the health system. This is also essential for good elder care, although one must make room for the family and caregiver in this ideal. Just as we now have some standardization to education for diabetes, we need standard content for education and training for elders and for the families and caregivers of elders with dementia, incontinence, falls and other chronic geriatric conditions. Once we have identified the core educational content, we have many possibilities for creative delivery in non-clinical settings such as senior centers, elderly nutrition centers, and the home.

The Chronic Care Model is a good fit for elder care, and the framework it provides is a valuable roadmap for implementing specialty elder care services. Most importantly, developing specialty geriatric services within the context of a broader redesign for effective management of chronic conditions promises better care for the chronic conditions that limit the lives of our elders.

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Caring for the Caregiver

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Providing care for elders is nothing new to American Indian and Alaska Native (AI/AN) families. It is estimated that caregivers in the United States provide about 80 percent of all long-term care services.[1] That percentage may be even higher in AI/AN communities since more elders have chronic diseases and are functionally impaired than the general population.[2-5]

Caregiving experience varies from family to family and among family members. For some, their elder lives in their own home and needs occasional help with some household chores, shopping, or transportation. For others, their elder lives with them and requires ongoing help with feeding, bathing, getting out of bed, and medications. In some families, several children and grandchildren share in caregiving. In others, one person is the primary caregiver. For many families, caregiving has become more complex because of societal and health system changes.

Consumer directed services are becoming more prevalent since people want more control of what types of services they receive, who provides it to them, and where it is provided. In addition, patients are being sent home "quicker and sicker" from hospital stays, and more procedures are being performed on an outpatient basis. Family members are providing some medical care that was previously provided by health care practitioners. In a study of 1,023 family caregivers, 43 percent reported that they provided at least one medical task, including wound care, pumps and machines at the bedside, and medication administration. One in six of these caregivers helped give medications in forms other than oral preparations, and 26 percent helped to give five or more different mediations.[6]

Many studies and reports during the last few years have suggested that although caregiving may bring personal satisfaction, it often has a negative impact on some caregivers' physical, mental, and emotional health. This is especially true for those who are the primary caregiver or those providing care for many hours a day over a long period of time. Frequently reported health consequences include depression and anxiety disorders, poorer self-reported health status, diminished immune responses resulting in more frequent infections, increased risk of hospitalization, and increased risk of death.[7-12]

Today, family caregiver support services are available in all 50 states through the National Family Caregiver Support Program (NFCSP) and to nearly 250 tribes through the Native American Family Caregiver Support Program (NAFCSP). These programs were established through the Older Americans Act Amendments of 2000 and were funded at $162 million in fiscal 2006. Through these programs, caregiver support services are provided within five basic categories: 1) information to caregivers about available services; 2) assistance to caregivers in gaining access to the services; 3) individual counseling, support groups, and caregiver training to assist caregivers in making decisions and solving problems related to their caregiving role; 4) respite care to provide temporary relief from their caregiving responsibilities; and 5) supplemental services on a limited basis, to complement the care provided by caregivers.[13]

Caregiver Assessment

Although health care practitioners increasingly recognize the role families play in caring for elders, little attention has been paid to assessing the well-being of the caregiver. Identifying caregivers who are at risk for negative health consequences will help identify appropriate interventions and services before the caregiver becomes ill and unable to continue in their caregiving role. Additionally, caregiver assessments may determine eligibility for caregiver support services. Unfortunately, there is no uniform caregiver assessment tool because there is a lack of consensus about what should be included and how to assess family care.[14] However, some caregiver assessment tools have been developed for use by health care and social service practitioners.

The American Medical Association (AMA) developed and tested an 18 question Caregiver Self-Assessment Questionnaire to encourage physicians and other health practitioners to recognize and support family caregivers. This questionnaire and the AMA report "The Health Risks of Caregiving" are available at *http://www.ama-assn.org/ama/pub/category/4642.html*.[15]

Most states have implemented caregiver assessments as a part of their state and federally funded caregiver support programs. A few have caregiver assessments as part of their Medicaid home and community based services waivers (HCBS), especially those that have respite as a waiver service. The Family Caregivers Alliance, National Center on Caregiving surveyed the states on uniform caregiver assessments and areas assessed and found great variation in whether uniform assessments were used and the type of information collected in the assessment. For example, Alaska, Idaho, and Wisconsin did not use a uniform caregiver assessment for their NFCSP, HCBW or their state funded caregiver program. Nebraska and North Dakota used a uniform caregiver assessment tool for their NFCSP but not for HCBS or state funded caregiver programs. Minnesota and

South Dakota used a uniform assessment tool for all their caregiver programs. Information for each state can be found at *http://www.caregiver.org/caregiver/jsp/home.jsp*.

Caregiver Resources

Once caregivers have been assessed and their needs identified, the appropriate services and caregiver supports can be provided. Many organizations have developed caregiver support materials. Some examples of these organizations and materials are discussed below.

Administration on Aging. The Administration on Aging's (AoA) website hosts the "Caregiver Resource Room" where families, caregivers, and professionals can find information about the NFCSP and the NAFCSP. It includes information on caregiving, where you can turn to for support and assistance, and providing services to caregivers. Examples include:

- *Caregiver Tip Sheet http://www.aoa.gov/prof/aoaprog/caregiver/overview/CaregiverTipSheet.pdf*
- *28 Fact Sheets, including fact sheets on the NAFCSP demonstration projects http://www.aoa.gov/prof/aoaprog/caregiver/overview/fact.asp*
- *HHS Compendium of Caregiver Support Activities*

http://www.aoa.gov/prof/aoaprog/caregiver/careprof/progguidance/resources/CAREGIVER%20COMPENDIUM%201.3.02.pdf

AARP. The AARP is a national, nonprofit membership organization of persons age 50 years and older. Their website, *www.aarp.org*, contains a wide variety of materials about caregiving. Selected examples include:

- *Ahead of the Curve: Emerging Trends and Practices in Family Caregiver Support, March 2006. http://www.aarp.org/research/longtermcare/resources/inb120_caregiver.html.*
- *Family Caregiver Support Services: Sustaining Unpaid Family and Friends in a Time of Public Fiscal Constraint, April 2005*: *http://www.aarp.org/research/searchResults.html?search_keyword=caregiving&x=10&y=3*.

American Medical Association. The AMA has started an effort to address the burden of caregiving through the development of web-based materials and information. In their Caregiver Health Assessment section, background information on caregiving and dementia is provided as well as other useful caregiver resources. The information is available at *http://www.ama-assn.org/ama/pub/category/5099.html.*

American Red Cross. The American Red Cross has developed the Family Caregiver Program, a nine-session educational program for family caregivers teaching skills building. As part of the program, they have produced individual booklets on the subject area of each module as well as a video. The sessions include:

- Assisting with Personal Care
- Positioning and Helping Your Loved One Move
- General Caregiving Skills
- Home Safety
- Healthy Eating
- Caring for a Loved One with Alzheimer's Disease or Dementia
- Caring for a Loved One with HIV/AIDS
- Legal and Financial Issues
- Caring for the Caregiver

Contact your local American Red Cross Affiliate to find out if they are offering this program. More information can be found on the American Red Cross website, *http://www.redcross.org/services/hss/care/family.html*.

American Society on Aging. The American Society on Aging (ASA) was funded by the Administration on Aging (AoA) to implement Caregiving Awareness through Resources and Education for Professionals (CARE-Pro). Developed with the assistance of the American Nurses Association, the National Association of Social Workers, and the American Occupational Therapy Association, CARE-Pro is a web-based, multimedia, self-study curriculum to increase the skills and knowledge of professionals serving family caregivers. More information on CARE-Pro can be found on ASA's website, *http://www.asaging.org/caregiving_resources.cfm*.

The ARC of the United States. The ARC of the United States is a national advocacy organization dedicated to children and adults with intellectual and developmental disabilities. Information on caregiving can be found at *www.thearc.org/afcsp/agingresources.htm*.

- Help for Caring
- Strategies for Finding and Working with Older Caregivers
- Aiding Older Caregivers of Persons with Intellectual and Developmental Disabilities: A Tool Kit for State and Local Aging Agencies

Additional resources for caregivers can be found on the website for the Rehabilitation Research and Training Center on Aging with Developmental Disabilities at the University of Illinois at Chicago, *http://www.uic.edu/orgs/rrtcamr/familya.html*.

Eastern Area Agency on Aging/University of Maine. The Eastern Area Agency on Aging, in conjunction with the University of Maine at Orono, was awarded a grant from AoA under the NFCSP to implement Maine Primary Partners in Caregiving. Materials produced under this grant can be found on the University of Maine's website: *http://www.umaine.edu/mainecenteronaging/pubandrep.htm*, and include:

- A Handbook for People Who Care: Caring for Parents and Other Older Adults
- Family Caregiving
- Depression
- The Health Care Team Includes the Caregiver

- Elder Abuse, Neglect and Exploitation
- Men Provide Care to Relatives Also
- Caregiving Resources

A companion series of fact sheets for primary care practitioners on the same topics is also available on the website.

Family Caregiver Alliance. The Family Caregiver Alliance (FCA) in San Francisco operates the National Center on Caregiving (NCC). The FCA provides a central source of information and technical assistance on caregiving and long-term care for policymakers, health and service providers, media, program developers, funders, and families. Their website, *www.caregiver.org*, contains a wealth of valuable resources for caregivers and providers, including:

- *Fact Sheets* – FCA has published over 100 fact sheets on different aspects of caregiving and long-term care. Many of these fact sheets are available in languages other than English. Some examples are:
  - Be Wise…Immunize
  - Caregivers Guide to Medications and Aging
  - Caregiving and Depression
  - Women and Caregiving: Facts and Figures
  - Caring for Adults with Cognitive and Memory Impairments
- *Monographs* – Several examples include:
  - The State of the Art: Caregiver Assessment in Practice Settings
  - Navigating the Care System: A Guide for Providers to Help Family Caregivers
- *Caregiving Policy Digest* – an electronic newsletter published by FCA and distributed twice a month. It contains news of recent federal and state legislation related to caregiving, resources, research studies, etc. Registration can be done on line for this newsletter as well as for their regular newsletter.
- *State Profiles* – As a result of the 50 state survey FCA conducted for AoA, they prepared a series of state profiles that contain useful information on the various state programs that can benefit family caregivers.

Generations United. Generations United (GU) is a Washington, DC based organization dedicated to improving the lives of children, youth, and older people through intergenerational collaboration, public policies, and programs. They have produced a series of fact sheets that can be located at *http://ipath.gu.org/GU_Fa8161318.asp*:

- Caregivers of All Ages
- Information and Assistance Programs
- Housing Needs and Challenges
- Respite Care
- Support Group Development

Massachusetts Executive Office of Elder Affairs. The Massachusetts Executive Office of Elder Affairs has developed a Caregiver Resource Center specifically for caregivers of deaf, hard of hearing, and late deafened elders. In conjunction with the Massachusetts Commission of the Deaf and Hard of Hearing, they produced the following products that are available on their website, *www.mass.gov/elder*.

- Helping Caregivers Understand Hearing Loss, Communication Access and Related Issues (power point presentation)
- Serving Older Americans Who are Deaf, Hard of Hearing or Late Deafened and Their Caregivers: Suggestions for State Units on Aging

Mather Lifeways. Mather Lifeways, in Evanston Illinois, developed Powerful Tools for Caregivers, a train-the-trainers, six-module program, to teach self-care techniques that can be used by family caregivers. This program has been adapted in several states, and several tribal caregiver program staff have received the training. An online version is currently being piloted. More information can be obtained from their website, *www.tools4caregivers.com*.

National Alliance for Caregiving. The National Alliance for Caregiving (NAC) is a coalition of national organizations focusing on issues related to family caregiving. NAC conducts research, policy analysis, program development, and public awareness of caregiving. Their website, *www.caregiving.org*, contains the following and other useful publications and information:

- Caregiving in the US – A national survey conducted by NAC and AARP in 2004
- Care For the Family Caregiver: A Place to Start. Prepared with HIP Health Plan of New York
- Resources for Caregivers 2004
- A Family Caregiver's Guide to Hospital Discharge Planning
- Family Caregiving 101 Website, *www.familycaregiving101.org*, was developed by the NAC and the National Family Caregiver Association. It contains a wide variety of useful information for family caregivers.

National Cancer Institute. The National Cancer Institute has produced three booklets on issues affecting caregivers of relatives with cancer. They include:

- When Someone You Love Is Being Treated for Cancer *http://www.cancer.gov/cancertopics/When-Someone-You-Love-Is-Treated*
- When Someone You Love Has Advanced Cancer *http://www.cancer.gov/cancertopics/When-Someone-You-Love-Has-Advanced-Cancer*
- Facing Forward When Someone You Love Has Completed Cancer Treatment *http://www.cancer.gov/cancertopics/Facing-Forward-When-Someone-You-Love-Has-Completed-Cancer-Treatment*

University of Hawaii at Manoa. The University of Hawaii at Manoa was funded for a three year period by AoA to develop culturally appropriate end-of-life educational materials for family caregivers. Under this grant the following publications were developed, which can be accessed from their website, *www.hawaii.edu/aging*:

- Advance Care Planning – Making Choices Known
- Planning Ahead – Funeral and Memorial Services
- Preparing to Say Good-Bye – Care for the Dying
- When Death Occurs – What to Do When a Loved One Dies
- Help for the Bereaved – The Healing Journey

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Annual Elders Issue

This May 2006 issue of THE IHS PROVIDER, published on the occasion of National Older Americans Month, is the eleventh annual issue dedicated to our elders. We are grateful for the opportunity to honor our elders with a collection of articles devoted to their health and health care. Indian Health Service, tribal, and urban program professionals are encouraged to submit articles for the May 2007 issue on elders. We are also interested in articles written by Indian elders themselves giving their perspective on health care issues. Inquiries can be addressed to the attention of the editor at the address on the back page of this issue.

Palliative Care Guidelines for the Indian Health System: A Progress Report

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Formal palliative and end-of-life services have been largely unavailable to the majority of patients and families in the Indian health system, with no common understanding of what constitutes the basic essentials of palliative care in a comprehensive health system. Clinical staff responsible for caring for dying patients often have had little or no training in the specific skills and knowledge base of palliative care, and consultation resources are often not available.[1] The Indian Health Service (IHS) has embarked on an effort to improve access to quality palliative care, and has had support in this effort from the National Cancer Institute through the Quality of Cancer Care Committee.

In May 2005, we began work on a set of palliative care guidelines for the Indian health system. These guidelines were written with the intent to provide a framework for the core palliative and end-of-life services that are an essential part of the comprehensive set of health care services delivered through the Indian health system. The need for palliative care guidelines was identified in focus group discussions with Indian health clinicians at the Changing Cancer Patterns in Native Communities national cancer conference hosted by the Spirit of EAGLES program on September 10 - 12, 2004, in Phoenix, Arizona. The Clinical Practice Guidelines for Quality Palliative Care, developed by the National Consensus Project for Palliative Care, a national set of guidelines, were released in May 2004 (available online at *http://www.nationalconsensusproject.org*). The National Consensus Project guidelines were then used as a model, and modifications were made in order to adapt them specifically to meet the needs of programs delivering care within the unique circumstances of Indian health.

When the initial modifications were complete, the first draft of the guidelines was circulated via e-mail to an Internet workgroup recruited from various sectors of the Indian health system. Ten interdisciplinary workgroup members, including physicians, pharmacists, and nurses, reviewed the guidelines and provided comments on their content and suggested changes and additions. This process took place over the course of approximately six months, and a finished draft of the guidelines was completed in November 2005. The draft includes an introduction, background, and sets of guidelines spread over seven domains, ranging from structure and processes of care to care of the imminently dying patient, covering physical, psychological and psychiatric, social, religious, spiritual, and cultural aspects of care as well.

After the guideline draft was completed, we then set out to seek professional opinions from people outside the Indian health system. We compiled a list of national and international leaders in the field of palliative care, and contacted several physicians, researchers, educators, pharmacists, and social workers to ask them for their assistance. We asked primarily for recommendations in terms of content, and requested general comments on the draft guidelines, in addition to opinions regarding each specific domain. Our goal was to be sure that the guidelines address the important considerations and reflect current approaches to the provision of high quality palliative care services. The majority of the palliative care professionals we contacted agreed to our request for review, and to date we have heard from several people who have evaluated our first draft. We have gotten many helpful and constructive comments from these reviewers, and have now compiled all of these comments in order to return to the draft guidelines and make additional revisions. When the next phase is complete, the second revised draft of the guidelines will be available for more widespread review and evaluation by additional health care professionals in the Indian health system.

Along with the goal to develop a set of guidelines that can be widely implemented, we also hope to make palliative care resources more available to providers in the Indian health system. Some of these resources will be web-based through the IHS website, but we are also planning to make palliative care expertise available through consultants. We hope to develop a bank of palliative care consultants who will be readily available by telephone or e-mail to answer any specific questions that providers may have in regards to palliative or end-of-life care services. We also plan to make interdisciplinary training in palliative care more easily accessible in the Indian health system, through national meetings for train-the-trainer sessions as well as more localized approaches for individual service units in the future.

While there are challenges to providing palliative care across a diverse and dispersed health system, we feel we are well on the way to providing a set of care guidelines that can be used in a variety of settings and we will continue to work on this important project. We appreciate all of the input we have received thus far and look forward to your support and active involvement as we continue to advance toward the goal of ensuring access to quality palliative care throughout the Indian health system.

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Planning for Long Term Care Services

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Planning for long term care (LTC) services in American Indian and Alaska Native (AI/AN) communities can be an overwhelming process. The key questions are: what services are needed; what services are already available; who is providing the services; are they tribal or non-tribal; how extensive are the services; are tribal elders accessing them; and finally, are the services culturally appropriate? Tribal communities can begin answering these questions with the process described below.

Identifying Needs

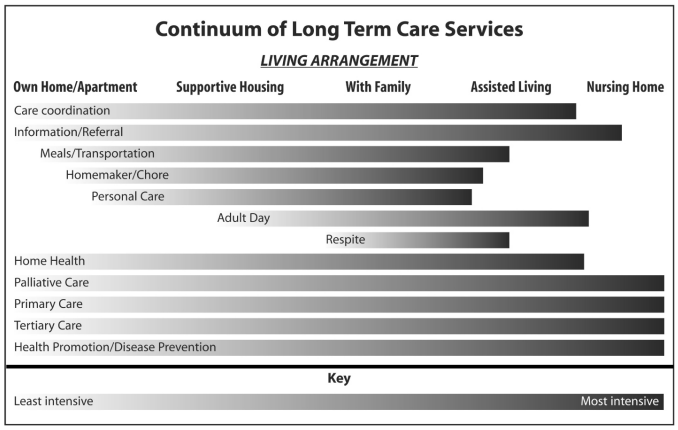
There are three components to identifying the needs of your elders. *Population estimates* can be obtained from the US Census or, more accurately, from tribal enrollments, since historically the AI/AN population is underrepresented in the Census. State demographers can be another source of data; they track population trends and may have specific data on the AI/AN population.

Determining *health and functional status* of the elder population can be done through a combination of sources. The National Resource Center on Native American Aging at the University of North Dakota has developed a survey instrument for interviewing tribal elders that can be used alone or in conjunction with other data. The RPMS system is also useful in determining health and functional status. Examining the reasons for hospitalization, outpatient visits, and death provides valuable information about the chronic diseases most prevalent for elders. Certain diseases such as arthritis, chronic obstructive pulmonary disease, and diabetes mellitus are more likely to affect the functional abilities of elders. Ideally, the Comprehensive Elder Exam tool developed by Dr. Bruce Finke, if used by tribal health providers, could provide the most accurate information about the health and functional status of the AI/AN elders in your service area.

Current *utilization of long term care services* provides another picture of the needs of AI/AN elders. Medicaid is the primary payment source for long term care services, including both nursing home care and community-based services in most states. The state Medicaid office should be able to provide information by ethnicity about the number of tribal elders in nursing homes and receiving services under the state's Medicaid waiver or personal care programs.

Identifying Resources

Long term care services include more than just nursing home care. Long term care can be provided in a variety of settings — one's own home or apartment, an assisted living facility, or a nursing home. LTC is a wide selection of services that are provided to an elder or individual with a disability who requires ongoing assistance with daily activities. The following diagram shows the range of services.



Which of these services are available to elders in your community? Begin with the list of services on this diagram and determine who is providing them to elders in your community. Also consider your CHRs; do they provide some special programs or services for elders? It can be helpful to make a chart listing all the services, indicating whether the provider is tribal or non-tribal, and describing the extent of the services and if tribal elders have access to and are comfortable using the services. This is especially important in urban areas where there may be a multitude of service providers, but not necessarily any that are meeting the needs of tribal elders.

Once the inventory is complete, determine what services are working well and what gaps still exist. If possible, investigate what other tribal communities are doing to provide services to elders. The American Indian/Alaska Native Long Term Care Conference offers an excellent forum to network with other tribes and learn about programs. There are some very innovative services in Indian country, which are highlighted at this annual conference. Additionally, look at your capacity as a tribal organization to provide services. Does your tribe have the workforce and financial resources needed to develop LTC services, or would you rather collaborate with current service providers to help them better serve AI/AN elders? What services could be implemented quickly? What services will need a longer planning process?

Of course, the most important consideration when choosing the direction your tribal community will take in long term care planning is the desires of your elders. Elders in Alaska frequently say they want to remain in their own community, in their own home for as long as possible. The Alaska Native Elder Health Advisory Committee discusses all long term care options — nursing homes, rural assisted living homes, etc. — but they always return to the need to enhance and improve home- and community-based services in each village, so the elders can be at home near their family.

Kay Branch is the Elder/Rural Health Program Coordinator for the Alaska Native Tribal Health Consortium. More information about planning for LTC services can be found in an ANTHC report, Long Term Care Needs of Alaska Native Elders*, funded by the IHS. For more information, e-mail* pkbranch@anmc.org.

The UND survey can be found at http://www.med.und.nodak.edu/depts/rural/nrcnaa/.

Executive Leadership Development Program Announces 2006 Dates

VISION

The Executive Leadership Development Program is the preferred, premier leadership training program for Indian health care professionals.

PURPOSE

To educate current and future leaders to continually improve the health status of Indian people.

MISSION

The Executive Leadership Development Program will be the recognized leader in education and support services for Indian health care systems through collaboration, partnerships, and alliances.

Executive Leadership Development Program
New Dates

ELDP collaborates with federal, tribal, and urban Indian health care systems to develop and increase leadership and management skills. In addition, participants develop new relationships and networks with other executives within the Indian health care systems.

SESSION DATES:

Session One – Aurora, CO
May 8 - 12, 2006

Session Two – Aurora, CO
June 19 - 23, 2006

Session Three – Aurora, CO
July 24 - 28, 2006

The IHS Clinical Support Center is the accredited sponsor.

Contact:
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40 N. Central Avenue, Phoenix, Arizona 85004-4424
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Internet: *ELDP@mail.ihs.gov*
Website: *www.ihs.gov/nonmedicalprograms/eldp*

A Service Unit-Based Approach to Integrated Care for the Elderly

Tim Domer, MD, Clinical Director, Fort Defiance Indian Hospital, Fort Defiance, Arizona

The first meeting of the Fort Defiance Elder Care Task Group (ECTG) took place on February 18, 2000. The Group was formed in response to several difficult elderly patient situations that required an interdisciplinary approach. Prior to the group's formation, attempting to meet the well-recognized medical, social, and legal needs of many elders was frustrating and often unsuccessful because of the fragmented and uncoordinated way in which these services were provided.

Our approach was to gather together representatives of all the programs, departments, and groups with some component of elder care, in one room at one time and begin the process of individual case management. We operated under the philosophy that we all had common goals — i.e., to do everything we could to improve the quality of life of our elders and to keep them safely in their own homes. We also agreed that any barriers to reaching these goals would be addressed and removed if possible.

Present at our first meeting were representatives from the Navajo Nation (NN) Community Health Representative (CHR) program, Arizona Long Term Care Services (ALTCS), NN Department of Social Services, NN Social Services Adult In-Home Care, Inter-Tribal Council of Arizona, Fort Defiance Indian Hospital (FDIH) Social Services, FDIH Public Health Nursing (PHN), FDIH Dietitics, and the FD Service Unit Clinical Director. Most of the programs represented were already involved in the care of the two particular patients for whom we began case management.

What became clear quickly was that the biggest barrier to effectively meeting needs was the lack of coordination and communication between all of the programs. Individually, each member was working diligently and was obviously committed to doing their best, but the lack of coordination and communication resulted in some services being duplicated and some needs being ineffectively addressed or overlooked altogether. We determined that for the purposes of case management we would operate as one organization.

The first step was to develop a flow sheet that tracked the identified needs, the services being provide, the services needed, and the individuals responsible. Next, a plan of care was written that identified how the specific needs would be addressed and who would be involved in meeting them. The third step was to schedule joint visits to the patients' homes and joint meetings between individuals with similar or overlapping responsibilities.

Initially we met monthly. Lucinda Martin, the supervisor of FDIH Medical Social Services, coordinated the meetings, sending out reminders and making follow up phone calls and e-mail contact with group members. She also wrote the overall care plan and updated the flow sheets. Each meeting brought the group closer together. Better and more efficient ways were found to address needs or problems that arose. Additional services and program representatives were identified and invited to join. We soon began meeting twice monthly, with the second meeting devoted to planning and development of the group itself.

We developed a standardized referral form. High-risk elders were referred to the ECTG from many sources: the inpatient Medical Surgical Unit, medical providers, CHRs, PHNs, BIA and IHS Social Services, the Dine' Elder Protection Agency (DEPA) and any program represented on the ECTG. We also developed goals and objectives for the group. Training needs were identified, including some basic training in geriatrics and elder rights. Under the direction of Ms. Martin, a detailed local resource manual was produced and is updated annually.

In addition to the programs listed above, the current ECTG includes the Navajo Area Agency on Aging (NAAA), BIA Social Services, the New Mexico Alzheimer's Association, the Dine' Elder Protection Court Advocate, and the FDIH Home Based Care program. Representatives for the local private home care companies, who have clients followed by the ECTG, also regularly attend.

In January 2006, a formal Comprehensive Elder Assessment clinic was started. On the second and fourth Tuesday of every month, 2 - 3 elders receive a full-day, multi-disciplinary evaluation. The disciplines included are Social Services, Rehabilitation Services (PT), Mental Health, a geriatrician, Audiology, Dental, Optometry, and Benefits Coordinator. Each discipline has a designated time to meet with and evaluate the elder. Our evaluation form is based on information found on the Elder Care Initiative section on the IHS web site: *http://www.ihs.gov/misc/links_gateway/sub_categories.cfm?sub_cat_id=060703*.

Toward the end of day, all participants meet, with the patient and care-taker present, discuss the findings, and formulate a follow up plan with recommendations to the patient's primary provider. The primary provider generally attends the closeout session.

In summer 2005, the FDIH Home Based Care (HBC) program admitted its first patient. The HBC program grew out of the need to provide post acute-hospital care, sub-acute and chronic care of certain high risk out-patients, and to provide hospice and palliative care in the home. Since there were no formal home care or hospice programs near Fort Defiance,

many patients requiring these services were either kept in the hospital for long periods or were transferred far from home.

The services provided by the HBC program are distinct from those provided by the PHN program (see attached referral flow sheet below). The program is growing rapidly and has been well accepted by hospital staff, patients, and families.

Under the direction of Ken White Jr., the FDIH Business Office Manger, Arizona Medicaid, which funds long term care, was approached about billing for the services provided by the HBC program. After several meetings, Arizona Medicaid has agreed to pay for HBC using established home care codes and required documentation. Our first bills will be submitted this month.

All of these new programs and initiatives would not have come to fruition without the strong support of Franklin Freeland EdD, CEO of Fort Defiance Service Unit. He has demonstrated a deep concern for and commitment to providing services for the elders and for those patients facing end-of-life issues. We deeply appreciate his leadership.

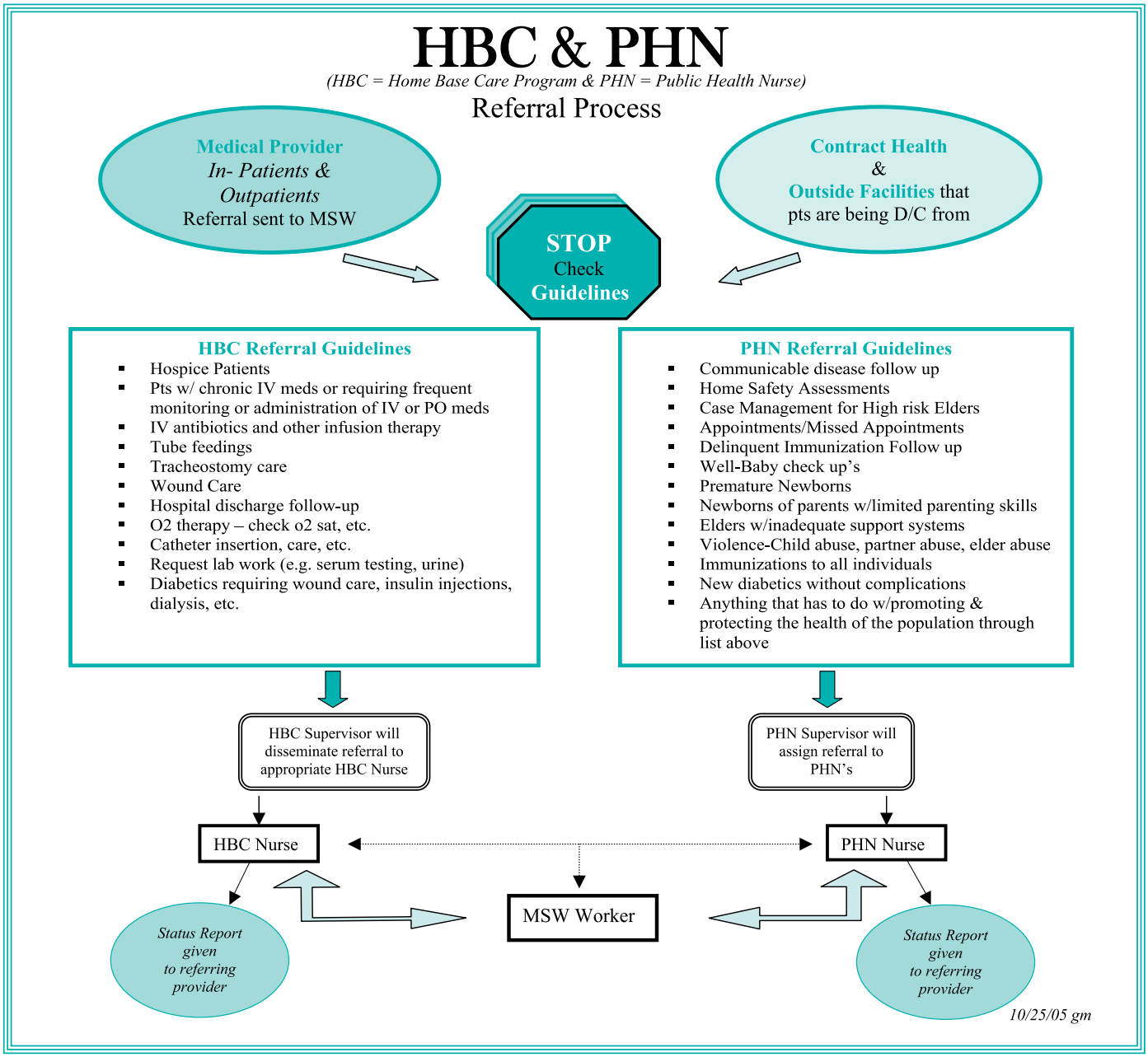
More information on the various programs can be obtained from the following individuals:

Elder Care Task Group: Lucinda Martin MSW, at *Lucinda.Martin@ihs.gov*

Home based care: Gina Milford, at *Gina.Milford@ihs.gov*

Comprehensive elder assessment: Timothy Domer MD, at *Timothy.domer@ihs.gov*

Coding and billing for services: Kenneth White Jr., at *Kenneth.WhiteJr@ihs.gov*.



Editor's Note: The following is a digest of the monthly Obstetrics and Gynecology Chief Clinical Consultant's Newsletter (Volume 4, No. 4, April 2006) available on the Internet at http://www.ihs.gov/MedicalPrograms/MCH/M/OBGYN01.cfm. *We wanted to make our readers aware of this resource, and encourage those who are interested to use it on a regular basis. You may also subscribe to a listserv to receive reminders about this service. If you have any questions, please contact Dr. Neil Murphy, Chief Clinical Consultant in Obstetrics and Gynecology, at* nmurphy@scf.cc.

OB/GYN Chief Clinical Consultant's Corner Digest

Abstract of the Month

Protein to creatinine ratio in pre-eclampsia: are the data preceding the US benchmarks?

Background: Proteinuria is recognized as an independent risk factor for cardiovascular and renal disease and as a predictor of end-organ damage. The reference test, a 24-hour urine protein measurement, is known to be unreliable. A random urine protein:creatinine ratio has been shown to correlate with the 24-hour measurement, but it is not clear whether it can be used to reliably predict the presence of significant proteinuria.

Methods: We performed a systematic review of the literature on measurement of the protein:creatinine ratio on a random urine compared with the respective 24-hour protein excretion. Likelihood ratios were used to determine the ability of a random urine protein:creatinine ratio to predict the presence or absence of proteinuria.

Results: Data were extracted from 16 studies investigating proteinuria in several settings; patient groups studied were primarily those with preeclampsia or renal disease. Sensitivities and specificities for the tests ranged between 69% and 96% and 41% and 97%, respectively, whereas the positive and negative predictive values ranged between 46% and 95% and 45% and 98%, respectively. The positive likelihood ratios ranged between 1.8 and 16.5, and the negative likelihood ratios between 0.06 and 0.35. The cumulative negative likelihood ratio for ten studies on proteinuria in preeclampsia was 0.14 (95% confidence interval, 0.09-0.24).

Conclusion: The protein:creatinine ratio on a random urine specimen provides evidence to "rule out" the presence of significant proteinuria as defined by a 24-hour urine excretion measurement.

Price CP, Newall RG, Boyd JC. Use of protein:creatinine ratio measurements on random urine samples for prediction of significant proteinuria: a systematic review. *Clin Chem.* 2005 Sep;51(9):1577-86.

OB/GYN CCC editorial comment with Jonathan Steinhart, Shiprock and Jean Howe, Chinle

What would you do if you worked in an Indian health facility that was two hours away from a Level III nursery and a 30 week EGA patient presented with a blood pressure of slightly greater than 140/90 on two readings separated by six hours, a clean catch urine dipstick protein of 1+, and a mild headache?

One of the possible scenarios would include hospitalizing the patient in your facility and beginning a 24-hour urine collection for protein. Unfortunately the 24-hour urine collection is one of the most notoriously incomplete samples that we routinely encounter, especially in the outpatient setting. It is estimated that 10 - 20% of specimens are incomplete and should be discarded because of the difficulties associated with obtaining a complete collection. In addition, in some of our remote facilities, a 24-hour protein test is a "send out" test and it only gets sent out at noon on weekdays. Invariably, the collection for your patient is finished on Friday afternoon or Saturday morning.

The second issue is that pre-eclampsia can have a rapidly progressive course, and waiting 24 - 36 hours for a diagnosis when definitive neonatal care is a two-hour transport time away can mean the difference between an orderly transport of a stable maternal/fetal unit versus the emergent delivery of significantly preterm infant in a remote facility without adequate neonatal support.

Another scenario for the same patient would include performing a random spot urine protein to creatinine (P:C) ratio and triaging the patient based on that estimate. As Price et al note above, the P:C ratio on a random urine specimen provides evidence to "rule out" the presence of significant proteinuria as defined by a 24-hour urine excretion measurement.

In this clinical situation, the international community and the data have preceded the US national benchmark organizations. In 2001, the International Society for the Study of Hypertension in Pregnancy statement on the classification and diagnosis of the hypertensive disorders of pregnancy recommended either a P:C of > 30 mg/mmol (calculates to 0.26 mg/mg creatinine), or a 24 hour urine value of 300 mg/day for the baseline diagnosis of pre-eclampsia.

In 2005 the pre-eclampsia community guideline (PRECOG), following the National Institute for Clinical Excellence's recommendations for the development of guidelines, issued similar recommendations about a P:C of > 30 mg/mmol (calculates to 0.26 mg/mg creatinine). PRECOG

is supported by the Royal College of Obstetricians and Gynaecologists, the Royal College of Midwives, and the Royal College of General Practitioners.

On the other hand, neither the National Kidney Foundation, nor the American College of Obstetricians and Gynecologists recommends the use of the P:C in pregnancy. Perhaps after these two US groups re-examine the data, including the Price et al systematic review, and the international acceptance of P:C, then the U.S. recommendations may change.

Another disadvantage is that there is not complete agreement in the nephrology community on how to convert the P:C ratio to a similar 24-hour urine protein result. The prevailing view is that the P:C roughly correlates on a one for one basis with a 24-hour specimen, e.g., a P:C of 3.5 roughly correlates to a 24-hour urine protein of 3.5 grams. On the other hand, other nephrologists feel the ratio on a random urine specimen correlates closely with daily protein excretion in g/1.73 m2 of body surface area, when used in mild to moderate pre-eclampsia.

In addition, while a P:C of 0.2 appears to be the most commonly used cutoff, there is disagreement among the various authors about cutoffs. This creates a gray zone in the P:C range of 0.2 - 0.3 for a possible screening cutoff.

The urine P:C is a unit-less measure (mg/dl divided by mg/dl causes the units to cancel out) usually expressed as mg of protein per mg of creatinine. Hence if one knows the total amount of creatinine that a pregnant woman excretes per day, then one can estimate the 24-hour urine protein excretion. The diagnosis of pre-eclampsia, based on proteinuria, can be made at a P:C of 0.2, and further conversions can be made on a 1:1 basis, e.g., a P:C of 5.0 correlates to a 24-hour protein of 5.0 grams. As one should not base their entire management of pre-eclampsia on the degree of proteinuria, the P:C ratio result may at least provide help in triaging the patient to the proper level of care. Once at the proper care level, a 24-hour protein can be completed if necessary. The decision to intervene in severe pre-eclampsia should be made based on the whole clinical presentation, not on the degree of proteinuria alone. Another scenario involves the triage of a chronic hypertensive patient who can perhaps be monitored as an outpatient versus inpatient.

A 24 hour protein may still be indicated in some cases of severe pre-eclampsia, if time permits, as both the present and future pregnancies may be affected. Future pregnancies would be impacted as we currently recommend the use of daily aspirin therapy in patients with previous severe pre-eclampsia.

In summary, the use of the spot urine P:C has supplanted most of the 24-hour urine mesaurements done in both pediatric and adult nephrologists' clinical practices. Yet, the practice is not endorsed for use in pregnancy by the National Kidney Foundation, ACOG, or any U.S. national benchmark organization. This mismatch of U.S. benchmarks and clinical recommendations leads to confusion in the clinical care of US pregnant women.

The P:C offers significant advantages to pregnant Indian health system patients and should be explored for use at your facility. Considering the long track record of successful use of the P:C in adults with chronic renal disease, the endorsement of several major international professional organizations, plus the Price et al systematic review, the time may have come for our clinical practice to precede the US national benchmarks.

After discussion among your medical staff and local maternal fetal medicine and nephrology consultants, the P:C may offer significant advantages in the triage of AI/AN women with hypertensive disorders of pregnancy.

Resources

Frequently Asked Question: MCH web page. Can we use a protein to creatinine ratio instead of a 24-hour urine protein in pre-eclampsia? With an exhaustive set of resources. *http://www.ihs.gov/MedicalPrograms/MCH/M/documents/PCratio4306.doc*.

Milne F, et al. The pre-eclampsia community guideline (PRECOG): how to screen for and detect onset of pre-eclampsia in the community. *BMJ.* 2005 Mar 12;330(7491):576-80.

Brown M et al. The classification and diagnosis of the hypertensive disorders of pregnancy: Statement from the International Society for the Study of Hypertension in Pregnancy. Hypertens Pregnancy 2001:20(1)ix – xiv

From Your Colleagues
Shelley Thorkelson, Shiprock
Gestational Diabetes Mellitus Tracking Sheet

Diabetes and Pregnancy Program Flowsheet, Northern Navajo Medical Center
http://www.ihs.gov/MedicalPrograms/MCH/M/documents/GDMtrackingsheete.doc

Program Review and Case Management - Diabetes in Pregnancy

Processes of tracking case files using hard copy as well as RPMS and CMS computer systems
http://www.ihs.gov/MedicalPrograms/MCH/M/documents/gdmcasemanagement(3).ppt

Obstetrics
Glyburide is at least as effective as insulin therapy in treating gestational diabetes

Conclusion: In a large managed care organization, glyburide was at least as effective as insulin in achieving glycemic control and similar birth weights in women with GDM who failed diet therapy. The increased risk of preeclampsia and phototherapy in the glyburide group warrant further study.

Jacobson GF et al. Comparison of glyburide and insulin for the management of gestational diabetes in a large managed care organization. *Am J Obstet Gynecol.* 2005 Jul;193(1):118-24.

OB/GYN CCC Editorial comment

Despite Langer's 2000 results and the fact that recent expert opinion has recommended glyburide as an alternative treatment, only 13 percent of physicians in a 2003 study reported using this medication as first-line therapy. Jacobson and associates evaluated the use of glyburide versus insulin in the treatment of women with gestational diabetes mellitus that was unresponsive to diet therapy. A retrospective chart audit of women with gestational diabetes who required medication for control was performed for two years before the introduction of a glyburide protocol and for two years after the protocol was used.

Jacobson's study mirrors our positive experience with glyburide since Langer's 2000 study. It is still important to document that glyburide is not FDA approved in your initial discussion with your patient.

Use the "talk but not sing" rule: physical activity predicts GDM risk

Women who are physically active before pregnancy are less likely to develop gestational diabetes mellitus (GDM). GDM risk also rises with the amount of pre-pregnancy television viewing. From the public health view, it is important for women of reproductive age to keep an active lifestyle. Most studies of exercise have looked at its effects on chronic disease in middle-age and elderly women. Given that GDM is a risk factor for developing type 2 diabetes, the findings underscore the importance of physical activity for younger women as well. There's also evidence that GDM can increase a child's later risk of obesity and diabetes.

Conclusion: Our prospective study provides strong evidence that regular physical activity before pregnancy is associated with lower GDM risk.

Zhang C, et al. A prospective study of pre-gravid physical activity and sedentary behaviors in relation to the risk for gestational diabetes mellitus. *Arch Intern Med*. 2006;166:543-548.

OB/GYN CCC Editorial comment
Use the "talk, but not sing" rule

As there are no randomized data on diet in the literature, then what other evidence-based helpful interventions are there? Exercise has randomized data to support its benefit in control of fasting and postprandial glucose (Bung et al, Jovanovic-Peterson et al). Roland Dyck, et al describe a successful exercise program in Aboriginal women in Saskatoon, Saskatchewan. Alaska Native Medical Center has also instituted a successful exercise in pregnancy program.

An "exercise prescription" is something from which women with GDM should benefit. Something as simple as walking at a comfortable pace for 20 - 30 minutes after meals will usually favorably impact post-prandial glucose values and result in lower birth weight if done as part of a regular regimen. The patient's exercise activity level should allow the patient to "talk, but not sing."

Gynecology

Urinary incontinence: substantial economic costs and decrement in quality of life.

Methods: In a cross-sectional study at 5 US sites, 293 incontinent women quantified supplies, laundry, and dry cleaning specifically for incontinence. Costs were calculated by multiplying resources used by national resource costs and presented in 2005 US dollars.

Conclusion: Women with severe urinary incontinence pay $900 annually for incontinence routine care, and incontinence is associated with a significant decrement in health-related quality of life. Effective incontinence treatment may decrease costs and improve quality of life. LEVEL OF EVIDENCE: III.

Subak LL et al. The "costs" of urinary incontinence for women. *Obstet Gynecol.* 2006 Apr;107(4):908-916.

Child Health

Infant mortality reviews in the Aberdeen Area: strategies and outcomes

The authors set out to determine the cause and manner of deaths in the IHS Aberdeen Area from 1998 to 2002 and identify risk markers for infant mortality. They found that Sudden Infant Death Syndrome was the leading cause of infant death and accounted for 33% of infant deaths. Prematurity was the second leading cause and accounted for 22% of infants. The authors also found that infant mortality was recurrent; 32% of mothers of a deceased infant had another infant death. The authors note that participation of tribal team members provides an important cultural and community perspective. The authors conclude that the reviews have been very helpful in public education. They say that quality improvement actions are underway on substance abuse, mental health/bereavement issues, and reviews of fetal deaths.

Eaglestaff, ML et al. Infant mortality reviews in the Aberdeen Area of the Indian Health Service: strategies and outcomes. *Public Health Reports*. V.121 (March/April 2006)pp140-148.

OB/GYN CCC editorial comment

Kudos to the Aberdeen Area Perinatal and Infant Mortality Review (PIMR) Team!

Above is another article published in a national peer review journal that illustrates the excellent work the PIMR team is accomplishing. All IHS Areas and tribes should use the success of the Aberdeen Area as a benchmark for best practice.

Chronic disease and Illness

Breast cancer study from PIMC

Background: Breast cancer incidence and survival varies by race and ethnicity. There are limited data regarding breast cancer in Native American women.

Methods: A retrospective chart review was performed of 139

women diagnosed with breast cancer and treated at Phoenix Indian Medical Center in Phoenix, Arizona between January 1, 1982 and December 31, 2003. Data points included tribal affiliation, and quantum (percentage American Indian heritage) along with patient, tumor, and treatment characteristics.

Results: Most patients (79%) presented initially with physical symptoms. There were no significant differences based on tribal affiliation; however, higher quantum predicted both larger tumor size and more advanced stage at diagnosis. Obesity also significantly correlated with larger tumor size and more advanced stage. Treatment was inadequate in 21%; this was attributed to traditional beliefs, patient refusal, or financial issues.

Conclusions: When compared to national averages, Native American women presented at a later stage, underutilized screening, and had greater delays to treatment.

Tillman L, et al. Breast cancer in Native American women treated at an urban-based Indian health referral center 1982-2003. *Am J Surg.* 2005 Dec;190(6):895-902.
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=16307942

Editorial comment: Carolyn Aoyama

In the online CCC newsletter is a list of tips for improving mammography screening rates. I would appreciate it if you would review it and add any other pearls of wisdom that have made a difference in raising mammography screening rates in your setting. Let me know your thoughts at *Carolyn.Aoyama@ihs.gov.*

Features: ACOG
Less invasive management of cervical cytology abnormalities in adolescents

Abstract: The management of abnormal cervical cytology in adolescents differs from that for the adult population in many cases. Certain characteristics of adolescents may warrant special management considerations. It is important to avoid aggressive management of benign lesions in adolescents because most cervical intraepithelial neoplasia grades 1 and 2 regress. Surgical excision or destruction of cervical tissue in a nulliparous adolescent may be detrimental to future fertility and cervical competency. Care should be given to minimize destruction of normal cervical tissue whenever possible. A compliant, health-conscious adolescent may be adequately served with observation in many situations.

OB/GYN CCC editorial comment

Here is more about three of the key elements of the ACOG recommendations. What is an adolescent? In regard to cervical cancer screening, based on the natural history data and the rarity of cervical cancer in the population, women younger than 21 years are considered adolescents.

Why should we treat adolescents differently than adults? In natural history studies of adolescents with newly acquired HPV infection, the average length of detectable HPV is 13 months. In most adolescent patients with an intact immune system, an HPV infection will resolve within 24 months. Further evidence that the HPV infection will resolve without treatment comes from the high rates of resolution of CIN 1 and CIN 2, 70% and 50% respectively.

What is the recommendation on cervical intraepithelial neoplasia 2? Cervical intraepithelial neoplasia 2 is a significant abnormality that has classically required therapy. A variety of studies, including the ALTS trial, have demonstrated that this lesion may have a significant rate of resolution (up to 40%) in adults. This rate of resolution is suspected to be higher in adolescents. Based on these data and expert opinion, CIN 2 can be managed in adolescents with either observation or ablative or excision therapy. The adolescent patient who is monitored without therapy should be an individual deemed to be reliable regarding follow-up and have a good understanding of the nature of the abnormality and its risks. Follow-up can be individualized, with colposcopy or cytology every 4 – 6 months being a very conservative approach.

Evaluation and management of abnormal cervical cytology and histology in the adolescent. ACOG Committee Opinion No. 330. American College of Obstetricians and Gynecologists. *Obstet Gynecol,* 2006;107:963–8.

New guidelines call for restricted use of episiotomies
Summary of Recommendations and Conclusions

The following recommendation and conclusion are based on good and consistent scientific evidence (Level A):

- Restricted use of episiotomy is preferable to routine use of episiotomy.
- Median episiotomy is associated with higher rates of injury to the anal sphincter and rectum than is mediolateral episiotomy.

The following recommendation and conclusion are based on limited or inconsistent scientific evidence (Level B):

- Mediolateral episiotomy may be preferable to median episiotomy in selected cases.
- Routine episiotomy does not prevent pelvic floor damage leading to incontinence.

Episiotomy. ACOG Practice Bulletin No. 71. American College of Obstetricians and Gynecologists. *Obstet Gynecol,* 2006;107:957–62.

Breastfeeding: Suzan Murphy, PIMC
Early feeding choice and obesity

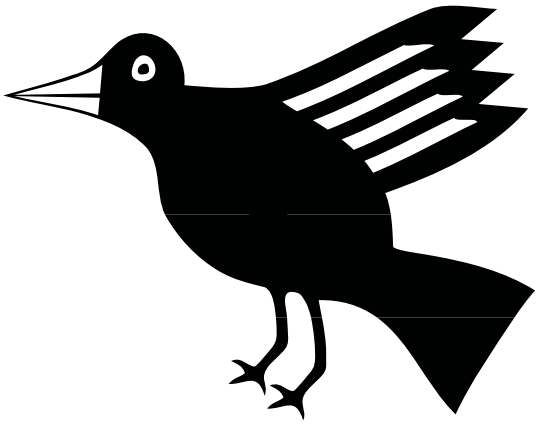
Obesity has increased dramatically in all age groups throughout the United States, including our children. In 1999, the prevalence of childhood obesity and overweight in AI/AN communities was estimated to be almost 2.5 times greater than general population. Recently, an IHS study reported obesity rates among Northern Plains Indian children to be almost half of all 5-year olds, and nearly one quarter for all children between the ages of 5 - 17.[1]

The long-term impact of obesity is profound. Type 2 diabetes and other obesity related health problems have become common in schools. Other likely but unmeasured consequences of obesity like poor self esteem and depression are linked with numerous social and academic problems. Sadly, researchers suggest that children born today could have a shorter life expectancy than their parents because of this epidemic and its impact.

There are many programs working toward leaner tomorrows. One method supported by research is to encourage breastfeeding as the early infant feeding choice. Examples of studies include research by CDC reporting a 30% reduction in risk for 4-year olds if breastfeeding continued for six months or longer.[2] Another large study of the US general population reported a 25% risk reduction in middle school age children who were mostly breastfed compared to those who were mostly formula fed in the first year.[3] While there are many possible confounders such as maternal smoking, parental obesity, and low/large birth weight, with infrequent exception, breastfeeding duration and exclusivity is inversely related to risk of obesity/overweight.

Another way of looking at early feeding choices is that formula feeding may increase risk of obesity. So, for families who decide to formula feed, it may be especially important to provide countermeasures to reduce risk – like being careful to avoid early overfeeding and encouraging healthy food and activity choices for their children.

1. Zephier E, et al. Increasing prevalences of overweight and obesity in Northern Plains American Indian children. *Arch Pediatr Adolesc Med*. 2006 Jan; 160(1):34:9.
2. Grummer-Strawn LM, et al. Does breastfeeding protect against pediatric overweight? Analysis of longitudinal data from the Centers of Disease Control and Prevention Pediatric Nutrition Surveillance System. *Pediatrics*. 2004; 113:e81-e86.
3. Gillman MW, et al. Risk of overweight among adolescents who had been breast fed as infants. *JAMA*. 2001; 285:2461-2467.



Domestic Violence
Native women, violence, substance abuse and HIV risk

Violence has become a critical public health issue in the US. It has had a particularly devastating impact on the health and well being of Native American women and children. The relationship between aggression and substance use is an intrinsic one: Native women often bear the brunt of violence in drinking situations, which places them and their children at extremely high risk for physical and sexual abuse. In urban environments, many Native American women find themselves in adult relationships that mirror the abuse they experienced and witnessed as children or adolescents. Not only does violence often occur while substances are being used, but conversely, substance use is a frequent consequence of sexual abuse. Clearly, the mental health repercussions of physical or sexual abuse are often severe. Trauma is associated not only with psychological distress, but also with risky behavior and social role impairment. Traumatized women engaging in substance abuse and unsafe sex are at high risk for contracting HIV/AIDS. This article explores the intersection of substance abuse, sexual and physical abuse, and increased HIV risk among urban Native American women in the San Francisco Bay Area.

Saylors K, Daliparthy N. Native women, violence, substance abuse and HIV risk. *J Psychoactive Drugs.* 2005 Sep;37(3):273-80.

Featured Website: David Gahn, IHS Women's Health Website Coordinator
The MCH frequently asked question (FAQ) site

This site offers over 425 answers to common questions about the care of women and children in the unique settings found in Indian Country. Answers include both a quick answer and then significant background and multiple resources and links. The site is maintained frequently (see section below) with 11 new FAQs this month and numerous existing FAQs being updated. There are 15 answers to questions on bilateral tubal ligation alone. Go here to explore the frequently asked question page: *http://www.ihs.gov/MedicalPrograms/MCH/M/mchFaqs.cfm.* Finally, if the particular question you have is not already posted, then please contact the OB/GYN Chief Clinical Consultant directly. You can get an answer at *nmurphy@scf.cc*.

Medical Mystery Tour

What is the common theme?

Patient #1: This 35 year old G2P1001 was originally scheduled for elective repeat cesarean delivery at 36 2/7 pending results of fetal lung maturity studies. The patient's prenatal course was significant for a first visit at 8 weeks. The gestational age was confirmed by a 10 week ultrasound. The patient was offered a quad screen and/or amniocentesis and declined both. The patient had gastroesophageal reflux disease and received omeprazole 20 mg per day orally. The patient's

previous delivery was significant for a low transverse cesarean delivery for an abruption placenta at term. She otherwise had a history of mild endometriosis and laparoscopy for an ovarian cystectomy.

Patient #2: This 20 year old G3P0020 at 40 2/7 presented with good early dating for an outpatient cervical ripening regimen. The patient had uncomplicated Class A_1 gestational diabetes mellitus. The patient weighed 193 lbs with a fetus in a cephalic presentation. Her cervical exam was 50% effaced, 1 cm dilation at the external os, firm, and posterior with the presenting part at -3 station.

What do these two patients have in common? Stay tuned next month for the rest of the story.

Midwives Corner Jenny Glifort, Anchorage
Liability in triage: management of EMTALA regulations and common obstetric risks

To clear up any misconceptions, I am following up on this topic from the December and February CCC Corners. The following information is paraphrased from Angelini DJ, Mahlmeister LR. Liability in triage: management of EMTALA regulations and common obstetric risks. *J Midwifery Womens Health.* 2005 Nov-Dec;50(6):472-8. It is not necessarily the opinion of the Indian health system or other agencies, unless otherwise stated.

There are two key points. According to Angelini, in the EMTALA setting, a physician has to certify that a patient is in "false labor." With careful consultation a "qualified medical person" can sign that certification after consulting with a physician who authorizes the patient's care. The physician must countersign the certification as contemporaneously as possible, e.g., within 24 hours, under certain conditions (see below).

Further, it is the hospital that designates who is a "qualified medical person" to provide appropriate medical screening. This can be a non-physician, e.g., CNM, or RN, etc. If properly applied, then a system of cooperation between the nurses, CNMs, and physicians can easily be devised and be within compliance with the EMTALA directives.

Adequate documentation is the key to success. Each facility should review the resources below. The L/D or triage team should come to agreement, and then implement a cohesive plan. In the meantime, the ACNM is working on changing the Federal regulations to allow CNMs to be able to directly diagnose "false labor" in EMTALA settings. The Technical Advisory Committee met on June 15 - 17, 2005. The Minutes reflect the ACNM proposed changes. The complete minutes can be found below, or contact Deanne Williams, Exec. Director, ACNM *http://new.cms.hhs.gov/FACA/07_emtalatag.asp.*

CCC Editorial Comment

The regulations make no specific provision for how or whether the physician may certify false labor by telephone based on information received from the qualified medical personnel. Hence, you should consult your administrative staff and all stakeholders at your facility and then develop thorough guidelines to support your local process . . . and then live by those guidelines, e.g., document, document, document.

Resources:

Freeman G. Final EMTALA rule lessens risk, yet getting docs on-call still a problem, *Healthcare Risk Manage***.** 25 (2004), pp. 109–113.

Glass D, Rebstock J, Handberg E. Emergency treatment and labor act (EMTALA). Avoiding the pitfalls, *J Perinat Neonatal Nurs***.** 18 (2004), pp. 103–114

Emergency Medical Treatment and Labor Act. Definitions: Emergency medical condition. 42 C.F.R. § 489.24 (b) (1). Available from *http://www.emtala.com/law/index.html*.

Department of Health and Human Services Centers for Medicare and Medicaid Services C42 CFR Parts 413, 482, and 489, Clarifying policies related to the responsibilities of medicare participating hospitals treating individuals with emergency medical conditions: Final rule. Part II. Federal Register Vol 68 (2003) September 9, No 174.

Emergency Medical Treatment and Labor Act. Examinations and treatment for emergency medical conditions and women in labor. 42 U.S.C. § 1395dd (1).

Centers For Medicare & Medicaid Services website *http://new.cms.hhs.gov/.*

Navajo News Kathleen Harner, Tuba City
Methamphetamine abuse among women on Navajo

This begins a four part series on the recognition and treatment of pregnant methamphetamine abusers.

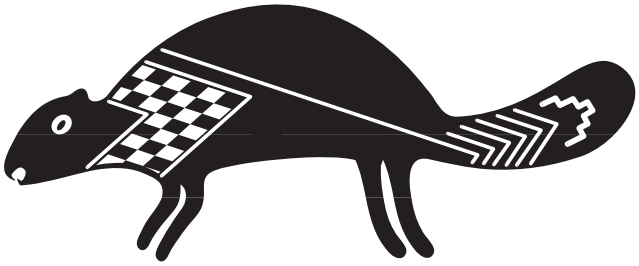
Headline, March 28, 2006, The Navajo Nation: "Navajo Nation Police arrest three meth dealers in Dilkon, Family of three includes 81-year-old grandmother, mother, daughter."

Unfortunately, this is not an aberration on Navajo or anywhere else in the country for that matter. Methamphetamine abuse (MA) is a real and growing problem. According to the US Department of Health and Human Services' *Results from the 2002 National Survey on Drug Use and Health: National Findings,* more than 12 million people age 12 and older (5.3%) reported that they had used MA at least once in their lifetime. Of those surveyed, 597,000 persons age 12 and older (0.3%) reported past month use of MA. Statistics for Navajo are difficult to come by, but Tuba City, a town of 10,000, saw 14 meth related deaths in 2002. A local health department study found that 12% of Tuba City's teens were using meth as were 17% of the residents between the ages of 27 to 45 years. One third of patients screened in the emergency room are positive for the drug. The Tuba City Regional Health Care Corporation (TCRHCC) obstetrical service had its first maternal death in eight years last April and it was directly attributable to MA use.

MA is a potent sympathomimetic agent that causes a massive release of dopamine in the brain, thereby inducing euphoria, increased alertness, and a sense of confidence in users. It can be injected, smoked, or ingested orally or anally. The timing and intensity of the "rush" is related to the method of administration. MA is readily available and relatively inexpensive. A 250 mg. packet can supply 3 – 4 users for 24 hours and costs only $25.00. This is about 75% less than cocaine users spend for their drug of choice. Negative effects of the drug include stroke, cardiac arrhthmia, stomach cramps, shaking, increased anxiety, aggression, paranoia, hallucinations, and death. Prolonged use results in tolerance. Abusers are more likely than others to engage in risky behaviors such as sharing needles or unsafe sexual practices.

The toxic effects of dopamine and catecholamine release caused by MA have potentially serious effects on the pregnant woman and her fetus. For the mother these may include severe hypertension, hypertensive crisis, cerebrovascular accident, intracranial hemorrhage, cardiac arrhythmia, pulmonary edema, agitation, confusion, seizure, hyperpyrexia, and cardiovascular collapse. Effects of long-term use may include anorexia, weight loss, aggressive behavior, psychosis, and cerebral arteritis. Fetal effects are more problematic. Animal studies suggest there may be a teratogenic effect but that is not yet established in humans. Mothers who abuse meth have significantly smaller infants than women who are drug free. MA abuse in pregnancy has been associated with increased rates of premature birth, fetal distress, and placental abruption. Perinatal exposure can lead to developmental disorders in neonates. Children of MA abusers are at high risk for neglect and abuse.

Late entry to prenatal care or missed prenatal visits is often an indication that a pregnant woman may be abusing drugs or alcohol. Cigarette smoking and a current or past history of other drug abuse might indicate MA abuse. Unfortunately, most pregnant women abusing MA never seek prenatal care and are often seen for the first time in the hospital in labor or experiencing side effects of the drug. The chronic MA abuser exhibits marked physical changes that include weight loss, poor dentition, and signs of aging; however these changes appear late in the course of addiction.



Abusers are tirelessly hyperactive and stay awake for long periods of time. They often have abrupt personality changes including argumentative and disrespectful behavior (unusual in the Navajo population), incessant talking, and newfound self-assertiveness. Borrowing or stealing money or the sudden onset of lying are often clues to drug use. Drug paraphernalia such as high temperature butane lighters, glass pipes, and empty drug packets may alert family members to MA abuse.

Next Month: Identifying MA abusers and suggestions for the treatment of the abusing Gravida

References: See online CCC Corner

Oklahoma Perspective: Greggory Woitte, Hastings Indian Medical Center
Peripartum Cardiomyopathy

Peripartum cardiomyopathy develops in the last month of pregnancy or in the five months post delivery with no identifiable cause for heart failure in the absence of heart disease. It is the fifth leading cause of maternal mortality and may be fatal to 20 - 50% of patients. Diagnosis may be difficult as many of the presenting symptoms are common complaints in pregnant women. However, prompt intervention when peripartum cardimyopathy is suspected by consultation of medicine and anesthesia, along with treatment aimed at heart failure can be potentially life saving.

Murali S, Baldisseri MR. Peripartum cardiomyopathy. *Crit Care Med.* 2005 Oct;33(10 Suppl):S340-6.

Tidswell M. Peripartum cardiomyopathy. *Crit Care Clin.* 2004 Oct;20(4):777-88, xi.

STD Corner: Lori de Ravello, National IHS STD Program
New CDC fact sheet on HPV in men

In March, the CDC produced an informative fact sheet on HPV in men that can be downloaded for distribution to patients from the CDC Division of STD Prevention's website at *http://www.cdc.gov/std/HPV/STDFact-HPV-and-men.htm*

Announcing New Program Manager for the IHS National STD Program

Scott Tulloch has joined the IHS National STD Program as its new Program Manager. He replaces Laura Shelby, who served in this capacity for nine years until her departure last year to attend graduate school in London. Scott brings with him a wealth of STD program management expertise; he is the former STD Director in the state of Maryland and has worked for state STD programs in Georgia, North Carolina, Chicago, and Maryland. He joins Lori de Ravello, Public Health Advisor; Dr. David Wong, Medical Epidemiologist; Cleora Chicharello, Stop Chlamydia Coordinator; and Yolanda Savage, Public Health Prevention Specialist. Scott, like Lori and David, is a CDC assignee to IHS. Scott can be reached at (505) 248-4344 or *scott.tulloch@ihs.gov*.

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

"It ain't what people don't know that's so dangerous; it's what people know that just ain't so."

— Will Rogers

Author's Note: Yes, this was also the quote last month, but it is so good, and so germane to this month's reviewed articles, that I am using it again.

Articles of Interest

Controlled delivery of high vs. low humidity vs. mist therapy for croup in emergency departments: a randomized controlled trial.

JAMA. 2006 Mar 15;295(11):1274-80. *http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=search&DB=pubmed*

Humidified air doesn't improve croup scores – end of story

Editorial Comment

Everyone knew that humidity improves croup – especially your grandmother. Humidity has long been used as a treatment for croup: from boiling kettles and sitting in the shower at home to blow-by humidity and mist tents in hospital. Mild croup often waxes and wanes spontaneously. Telling parents to go in the shower or turn on the humidifier gave pediatricians something to say and parents something to do while waiting spontaneous improvement to occur.

The authors of this study are taking away our placebo. They gave humidity every chance to succeed: they even optimized water particle size so that water vapor would reach the subglottic space, something that regular humidified air doesn't do. All for naught. Humidified air provided no statistical or clinical improvement. The authors also point out that there is some downside to humidity, especially croup tents, which make it difficult to monitor ill children. The authors do recommend proven treatments such as steroids and inhaled epinephrine.

Article of Interest

Fluoroquinolone use in children.

Pediatr Infect Dis J. 2006 Mar;25(3):257-8. *http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=search&DB=pubmed*

Quinolones have been associated with cartilage damage in beagle pups

Babies are not beagles but most physicians were reluctant to use this class of antibiotics in children despite their proven efficacy.

A review of multiple studies with thousands of children shows no link in humans between quinolones and joint injury.

Editorial Comments

For years they told us that beagle pups got cartilage damage from quinolone antibiotics and that no baby could be guaranteed joint safety. This review highlights the effectiveness of this class of antibiotics and possible pediatric uses. The authors suggest that there are instances in which quinolones may be the best antibiotic for your patient: Pseudomonas infections, complicated otitis media, resistant gram negative infections, and multi-drug resistant meningitis.

Infectious Disease Updates
Rosalyn Singleton, MD, MPH

Which Hib vaccine? Invasive *Haemophilus influenzae* type B (Hib) disease occurred at a higher rate and younger ages in many American Indian/Alaska Native populations before Hib vaccine. Now Hib vaccine has led to near elimination of Hib disease in the United States, but there are lessons to remember.

Because of the high risk of Hib disease within the first six months of life, the AAP Redbook Committee recommended that the first dose of Hib vaccine be given as PRP-OMP (PedvaxHIB®, Merck Inc.). PedvaxHIB® results in rapid seroconversion to protective antibody concentrations after the first dose. After the first dose of Hib vaccine any brand of Hib vaccine may be administered. To avoid the confusion, and to minimize the number of vaccinations, it may be easiest to use PevaxHIB to complete a series of three injections. While most IHS and tribal sites are using PedvaxHib® routinely, there are some sites that use ActHib®. If you are one of these sites, you can contact your state about switching to PedvaxHib®. If you encounter problems, contact Amy Groom, IHS Immunization Coordinator at *Amy.Groom@ihs.gov*.

What has happened to Hib disease rates in indigenous children? Hib disease has plummeted in Alaska Natives from 309 to 5.6/100,000; however this rate still looks higher than the current U.S. rate of 0.2/100,000. A similar rate (6.7/100,000) has been reported in Australian aboriginal children.

Bottom line: the rate of Hib disease in AI/AN children is now very low and the numbers of cases in AI/AN children are very small. PedvaxHIB® offers the best protection against Hib disease – especially for the first dose.

Recent literature on American Indian/Alaskan Native Health

Doug Esposito, MD, MPH

A controlled, household-randomized, open-label trial of the effect that treatment of *Helicobacter pylori* infection has on iron deficiency in children in rural Alaska. *J Infect Dis*. 2006 Feb 15;193(4):537-46. *http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=16425133&query_hl=2&itool=pubmed_docsum*

Last month, I reviewed a paper reporting an association between iron deficiency and active *H. pylori* infection in school-age Yupik children residing in western Alaska. The following paper reports the outcome of the treatment arm of that study, and seeks to determine if treatment of *H. pylori* infection is a useful intervention for pediatric iron deficiency in this and other populations.

The authors conducted a controlled, household-randomized, open-label trial of treatment of *H. pylori* infection in those children previously found to be iron deficient. The control group received a six-week course of iron sulfate therapy, while the intervention group received an identical course of iron sulfate plus a two-week course of triple *H. pylori* therapy. Re-evaluation of iron status and *H. pylori* infection via urea breath testing occurred at 2-, 8-, and 14-month intervals. Those children in the treatment group still found to be infected at the two-month interval received a 2-week course of quadruple *H. pylori* therapy.

There was no statistically significant improvement in iron deficiency with treatment and successful resolution of *H. pylori* infection in the population studied. The authors contend that, at this time, "a strategy of testing for and treating *H. pylori* infection in patients with isolated iron deficiency or mild anemia may not be appropriate in this and other disadvantaged populations worldwide . . .." The authors point out that their study was designed to determine the effect of treatment or resolution of *H. pylori* infection on iron deficiency, not necessarily whether *H. pylori* infection was causal of iron deficiency (please see my review of the subject last month), though such a relationship of causality might actually be present. Additionally, their study did not carry sufficient statistical power to uncover small effects, or differences between subgroups of study participants. Of course, further study is recommended.

Editorial Comment

It is commendable that this negative-effect study was published. As many of you know, studies reporting a positive effect are published with much greater frequency than those reporting a negative or neutral effect (known as positive outcome or publication bias). This unfortunate reality creates an overall prejudice in the published literature, which must be recognized when critically reviewing a subject. It is not that these negative effects are not uncovered. It is simply that such studies are just not submitted or accepted for publication as frequently as their positive counterparts, resulting in a less robust body of data on a subject than otherwise might be available.

That there was no statistical effect found in the current study calls into question the whole notion that treatment for *H. pylori* infection will improve iron status in co-affected individuals. There are a number of studies out there reporting such an effect, but most of these studies are either small or methodologically flawed in some significant way. In a recent personal communication with Dr. Baggett, one of the authors of the Alaska study, he suggests, "I think it's worth reading the paper, because I don't think negative results in this study disprove an association — just suggests that treating the *H. pylori* in school-age children may not improve the iron deficiency."

For me, this and other published articles on *Helicobacter pylori* reveal how little we know about this organism and its pathophysiology, diagnosis, and treatment in children. The clinical conundrum it presents is significant, and considerably frustrating. Hopefully, as more and more carefully designed studies are conducted and reported, we will be able to develop rational and effective protocols for identifying and treating *H. pylori* infection and its sequelae in our pediatric patients, especially in those kids presenting with abdominal pain or unexplained or unsuspected iron deficiency.

Previously Reviewed Article: Endemic iron deficiency associated with *Helicobacter pylori* infection among school-aged children in Alaska. *Pediatrics*. 2006 Mar;117(3):e396-404. Epub 2006 Feb 1. *http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=16452320&query_hl=9&itool=pubmed_DocSum*

Effect of a National Vaccine Shortage on Vaccine Coverage for American Indian/Alaska Native Children. *Am J Public Health*. 2006 Apr;96(4):697-701. *http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=16507733&query_hl=5&itool=pubmed_docsum*

In 2001-2002, the US experienced a shortage in 5 of the 8 vaccinations routinely recommended for children, including DTaP, varicella, MMR, pneumococcal conjugate, and Td vaccines. Studies have shown that regional and private versus public sector variability in access to and coverage of DTaP occurred during this shortage. It has been recommended that such inequities be remedied.

The authors of this article used the robust vaccine reporting system present in IHS to investigate disparities in coverage of AI/AN children with DTaP4 (the fourth in the recommended 5 dose series) as a result of the national shortage. They found that among children covered in the IHS immunization reports, there was a 14.8% overall decline in receipt of DTaP4 as compared to a 1.8% decline for the general US population and a 6% decline for children receiving their immunizations from public clinics. Interestingly, they

identified a surprisingly wide variability in declining immunization rates when IHS was stratified by region (4.5% in Alaska to 26.5 % in the southwest).

The authors suggest that the inequities in vaccine distribution identified specifically for IHS parallel the findings from other studies of the US population in general. There appeared to be a maldistribution of vaccine to rural areas, public clinics, and the southern United States during the period time of vaccine shortage. They suggest further evaluation of the vaccine distribution system and that more equitable distribution procedures and practices need to be implemented on a national, state, tribal, and local level.

Editorial Comment

I believe the results of this study speak for themselves. In the US, there exists a well characterized inequity in distribution of therapeutic and preventive medical resources. This situation is in desperate need of attention. The only question that remains is whether we as a society and a nation have the will to do what desperately needs to be done.

Improving Access to Health Care Among New Zealand's Maori Population. *Am J Public Health*. 2006 Apr;96(4):612-7. *http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=16507721&query_hl=1&itool=pubmed_docsum*

The similarities between the plight of the Maori and that of North American indigenous populations are striking. Statistical trends and the ever widening disparities in health status appear to have parallel roots. "In particular, it has been argued that the continuing disparities in health between Maoris and non-Maoris represent evidence that Maori health rights are not being protected as guaranteed under the treaty and that social, cultural, economic, and political factors cannot be overlooked in terms of their contribution to the health status of this group." Sound familiar?

This is an article worth reading for those who wish to examine cross-national parallels of health disparities and socio-economic struggles of native populations worldwide (or aboriginals, as the British Commonwealth countries are fond of saying).

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