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All-Terrain Vehicle Injuries in Children: A Hidden Epidemic

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All-terrain vehicles (ATVs) have become increasingly popular across the United States, especially among children younger than 16 years of age. Injury rates have risen even more rapidly.[1] When reviewing data from 1985 through 2001, the Consumer Product Safety Commission reported that children younger than 16 years old account for 37 percent of injuries and 33 percent of all deaths from ATVs.[2] Children under age 12 account for 10 percent of deaths related to ATVs.[2] The American Academy of Pediatrics (AAP) has been so concerned about this trend that it recommended banning the use of 2- and 4-wheeled off-road vehicles by children younger than 16 years of age.[3] No state has yet passed such legislation. Only 21 states have helmet laws.

There have been no formal statistics collected by the Navajo Nation on ATV use or injuries. Nevertheless, in Kayenta, Arizona, we have noted an increase in emergency department visits related to ATV use, including a fatality of a 13-year-old boy in 2002. We are located in a remote area on the northwestern corner of the Navajo Nation. Our area, with many dirt roads interspersed with a few paved highways, readily lends itself to ATV use, both for recreation and transportation. According to local teens we surveyed, primary injury risk factors include multiple riders on a single vehicle and lack of helmets.

In 2003, we received a three-year, $18,200 grant from the Children and Youth Initiative Injury Prevention Grant Program, sponsored by the Indian Health Service, to promote ATV safety awareness. This grant was accepted and administered by the Kayenta Health Care Corporation, the incorporated health board for our local Indian Health Service clinic. We have undertaken a small, grass-roots program to educate our youth and to distribute free ATV-specific helmets. Now in the second of its three years, our program has reached nearly 1000 children in our area and has distributed 200 free helmets.

Background on All-Terrain Vehicles

ATVs were introduced in the 1970s. They are gasoline-powered vehicles designed for off-road use, and can approach speeds of 30 to 50 miles per hour. The vehicles weigh between 300 and 600 pounds. Initially, there were three- and four-wheeled versions available. Production of three-wheeled ATVs was halted in 1988 because of a poor safety profile. The three-wheeled design and the high center of gravity created significant instability.

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Because of the high injury profile of early ATVs, the Consumer Product Safety Commission (CPSC) and the major ATV producers signed a consent decree to reduce injuries. Manufacturers agreed to prohibit use of ATVs with engines larger than 90 mL by children younger than 16 years and the use of ATVs with engines larger than 70 mL in children younger than 12 years of age. Manufacturers also agreed to provide free safety instruction at the time of purchase, to provide warning labels on their vehicles, and to create a voluntary standard to make ATVs safer.

Despite this consent decree, the rates of injury have not gone down. In 2001, the CPSC calculated an injury rate of 261.8 injuries per 10,000 vehicles in use as compared to a rate of 171.2 injuries per 10,000 vehicles in 1997.[4]

Most ATV accidents occur when the driver loses control and rolls or is thrown off the vehicle. Collisions with fixed obstacles, such as wires, tree branches, and fences, are also common ATV injuries. In 1998, the CPSC reported that 56 percent of accidents are caused by collisions and 28 percent by rollovers. Head injuries cause most deaths related to ATVs, most of which are instantaneous.[5] One study in West Virginia reported that two-thirds of deaths between 1985 and 1997 were related to head and neck injuries.[6]

Youth are more likely than more mature riders to sustain accidents. ATV operators under age 16 are 2.5 times more likely to be injured than drivers aged 16 to 34 and 4.5 times more likely to be injured than drivers 35 to 54.[7] Immature judgment and motor skills were the most common factors contributing to injury.[7]

Researchers at the University School of Medicine in Salt Lake City, Utah reviewed 268 visits to their emergency department for ATV-related injuries among children younger than 16 years.[8] Of the 268 patient visits reviewed, 25 percent of the patients sustained head or spinal cord injuries. Eight children died as a result of their injuries, and four were younger than eight years old. All those fatally injured were the drivers rather than passengers. Their study found a higher rate of injury among children than adult riders. Furthermore, they found that 15 percent of the injuries they reviewed occurred in children riding as passengers, despite the prohibition of carrying passengers on the majority of ATV types.

The Effectiveness of Helmets to Prevent Head Injury and Death

There are limited studies evaluating safety interventions specifically for ATVs. Consequently, in developing our intervention, we reviewed studies focusing on motorcycle and bicycle safety. First, we felt it was important to determine whether the efficacy of helmets would justify a program to distribute them to children at little or no cost.

It seems intuitive that helmets would decrease head injuries and deaths. However, particularly for motorcycles, it has also been suggested that helmets can limit the visual field and increase neck injuries. Despite these potential limitations, helmets have repeatedly been proven to be effective at preventing both head injury and death.

A Cochrane Review evaluated 53 observational studies. This review found that helmets reduced head injury by 72 percent and were able to reduce the risk of death as well, although by an unspecified rate.[9] However, in the motorcycle data, these protective effects are questionable at faster speeds. In California, passage of motorcycle helmet legislation has been effective in reducing injuries and fatalities caused by accidents.[10] During the first year the law was in effect, the number of hospitalized brain-injured motorcyclists in California dropped by 53 percent.[10] During the first two years that legislation was in effect, fatalities caused by motorcycle accident dropped by 38 percent.[10]

The data on the effectiveness of bicycle helmets is unequivocal. The seminal case-control study by Thompson, Rivara, and Thompson in 1989 revealed an 88 percent reduction in serious brain injury and an 85 percent reduction in the risk of head injury.[11] Multiple subsequent studies confirmed these initial findings. The AAP Committee on Injury and Poison Prevention position statement on bicycle helmets in 2001 reported that bicycle helmets can prevent up to 88 percent of serious brain injuries, 69 percent of head injuries, and 65 percent of injuries to the mid- and upper face.[12]

There are limited data specifically regarding ATV helmets and injury prevention. One investigator used a mathematical model to evaluate all ATV injuries reported to the CPSC. He reported that ATV helmet use could provide a 42 percent reduction in the risk of death and a 64 percent reduction in the risk of head injury.[13] The Morbidity and Mortality Weekly Report reviewed deaths in West Virginia (which does not have helmet laws) from 1985 through 1987. This study found that 2/3 of deaths were caused by head injuries and that helmets were protective.[14]

Thus, while data are limited, ATV helmets appear likely to provide protection. Extrapolation from the bicycle and motorcycle data suggests that helmets are an effective safety strategy to reduce brain injury and death for ATV riders.

Review of Safety Intervention Programs

Helmet laws have repeatedly been proven as an effective means to promote helmet use for riders of motorcycles, bicycles, and ATVS. Many studies of states with bicycle helmet laws have documented an increase in usage rates after laws were passed. In Georgia, helmet use increased from 35 percent to 53 percent,[15] and in Oregon, observed helmet use doubled to 49 percent among children after passage of helmet legislation.[16] Currently, 17 states and the District of Columbia have age-specific bicycle helmet use statutes in place.[17] Another case-control review by Thompson, Rivera, and Thompson showed that education programs eventually reached a plateau in effectiveness and required legislation for further improvement in observed helmet use.[18]

Motorcycle helmet legislation has also been proven to be

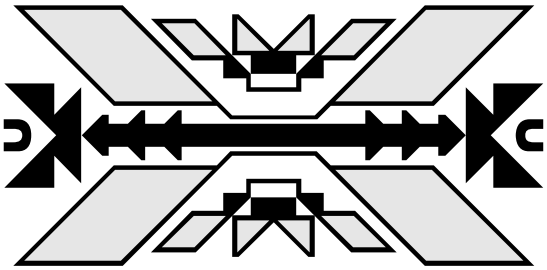
effective in increasing rates of observed helmet use. The US Department of Transportation reported in January 1998 that states with helmet legislation had higher rates of observed helmet use than those without.[19] In states with legislation, rates of use were 94 percent for Missouri, 98 percent for New York, and 80 percent for Pennsylvania. This compared to rates of 30 percent in Hawaii, 49 percent in Maine, and 33 percent in Wisconsin, all states without legislation in place.

A study of population-based ATV fatalities found that states with legislation had a fatality rate of 0.08 deaths per 100,000 persons while states without had a fatality rate 0.17 per 100,000 persons.[20]

A recent study compared ATV injuries in Pennsylvania, a state that legislates helmet use, and North Carolina, a state without legislation.[21] In both states, head injuries were the primary cause of death in ATV accidents. The investigators reviewed 1080 cases. Fewer children in North Carolina wore helmets (16.7 percent versus 35.8 percent), and living in North Carolina was an independent predictor for not wearing a helmet. This study, however, did not control for other factors, such as socioeconomic differences, that may explain variations in helmet use between these states.

While legislation is clearly effective, it can take many years to put in place. The effectiveness of various types of local bicycle helmet safety programs, from bike rodeos to anticipatory guidance in the physician's office, has been evaluated. The Harborview Injury Prevention and Research Center put out a Best Practices Guideline reviewing bicycle safety programs.[22] They found that interventions based on increasing helmet use through educational programs could be effective. However, programs that provide education alone were often unsuccessful. The best programs were multifaceted, including education, free or discounted helmets, parental involvement, and community participation.

Another study reviewed focus groups consisting of adolescents and adults in rural Arkansas.[23] Investigators interviewed the groups about what types of interventions would be likely to modify their behaviors. Although the study was limited by the small number of participants and questionable study design, investigators reported that forums at schools were considered effective means of education. They also cited the importance of peer educators, including peers who have sustained injuries.



Design of the Kayenta ATV Safety Program

The Navajo Nation currently has no helmet law. Our service unit lies in both Arizona and Utah. Both states have limited helmet laws. Arizona requires on-road use of helmets for those under 18 and off-road for all riders. Utah has limited helmet laws, requiring them only for minors under age 18 on-or-off road, and the Utah legislature determined that children 8 or over may operate an ATV on public land. Neither state requires operator licensing for ATV use.

While clearly legislation is lacking in our area, we wanted to initiate a more rapid, local response to a growing safety concern. Based on our review of the literature, we felt that providing helmets would be an important part of our intervention. We currently provide free helmets as a safety incentive to a limited number of children participating in the sessions. We identify all students who own an ATV but not a helmet, and we have been able to provide helmets to all these participants to date.

We have relied on peer education for each of our safety sessions. In summer 2004, several local high school students participating in Adventures in Medicine, a mentorship program at our clinic, learned about ATV safety. These students identified safety risks they perceive among their peers and designed a teaching module to be used in the ATV safety sessions. They also staged an ATV accident and took pictures, to which they assigned safety slogans. These pictures have been incorporated into our educational materials. Our local movie theater also agreed to show them as a public service advertisement before screening the main feature. These students have continued to participate as peer educators in our safety sessions throughout this year.

Our intervention is divided into five modules, as follows:

1. Registration: we register all children and collect demographic information. We identify students who own ATVs but do not own a helmet.
2. Education: we provide standardized safety instruction by a peer educator.
3. Injury Response: Emergency Medical Service technicians provide basic injury response and first aid information.
4. Evaluation: All students participate in a short quiz to document acquisition of basic safety information.
5. Helmets: Finally, we "raffle" the helmets, prioritizing students who ride but do not own helmets.

The primary weakness of our program is that, to date, we have targeted students at the local public schools. As a result, we have had limited parental involvement in the safety sessions. An additional weakness is that our program does not address legislative change.

Kayenta Demographic Information

To date, we have collected information from 226 students in grades 9 - 12, and 700 students in grades 5 - 8. Teachers brought entire classes to the training sessions, so we believe that these groups approximate a random sampling of Kayenta children.

Students in Grades 9 - 12. We collected information on 213 high school students. An additional, small session of 13 students was also completed but not included in our demographic analysis because they were ATV riders who came to an advertised session at the Boys and Girls Club.

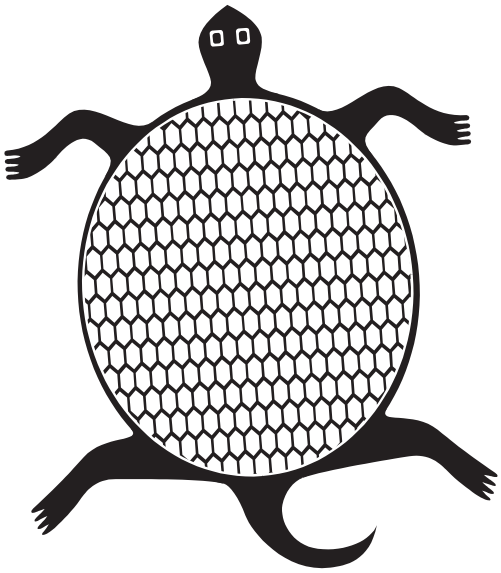
Of the 213 students, 105 (49.3%) owned an ATV. An additional 65 students reported riding a friend's ATV at least once per week. Thus, a total of 79.8% of these students report riding an ATV at least once per week. Of the 105 students who reported owning an ATV, 30 students (28.6%) reported owning a helmet.

Between our first and second safety sessions, we introduced a self-report item on the demographic information asking students about helmet use (always, usually, rarely, or never). A total of 98 students contributed information (included in above data). Of this group, 39 students reported owning an ATV. Only 11 students owned a helmet (28.2%). Of the 11 students who owned a helmet, 7 reported using a helmet always or usually. Of the 28 students who did not own a helmet, 21 reported never or rarely using a helmet. Thus, owning a helmet seems to be associated with using a helmet. While this does not imply cause, it does offer limited support to the potential effectiveness of helmet distribution.

Grades 5 - 8. We collected information on 639 students in grades 5 - 8. Of these students, 281 (44%) owned an ATV and 189 more students reported riding an ATV at least once per week. Thus, 470 or 73.6% of students report riding an ATV at least once per week. Of the 281 students who owned an ATV, 87 students or 31.5% owned a helmet.

All 639 students were asked about their helmet use. Of those who owned an ATV and a helmet, 58 of 87 students (67 %) reported wearing a helmet usually or always. Of the 185 students who own an ATV but do not own a helmet, 40 (21 %) report usually or always wearing a helmet. Thus, again, owning a helmet correlates with increased helmet use.

Many children in our community ride ATVs. The rate of use seems to be similar among younger and older youth. The overall rate of ATV use at least once per week among all children participating in our ATV safety sessions was 75.2 % (641 of 852 students participating).



Conclusion

All-terrain vehicles are growing in popularity. The high speeds achieved over rough terrain can cause serious accidents. Our youth bear a disproportionate burden of the risk of injury because of immature judgment and motor skills. To date, this dangerous pastime has received limited national attention. This is an issue of particular importance for rural reservations, such as the Navajo Nation. We must act, both locally and regionally, at a legislative level, to improve safety awareness and compliance.

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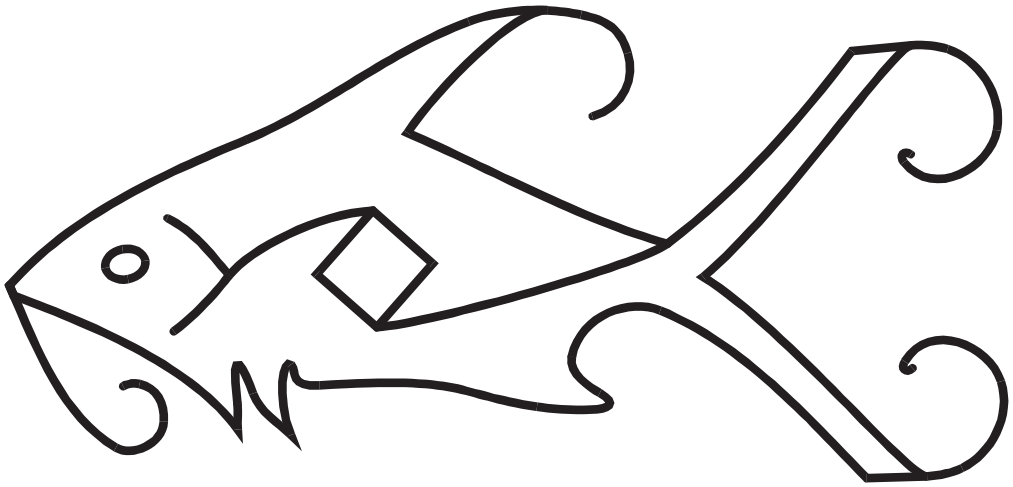

Cancer Information Seeking Preferences Among Health Professionals Serving American Indians in Minnesota, North Dakota, and Wisconsin

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Background

The primary purpose of this project was to identify by means of a phone survey the cancer information resources used by health professionals in tribal health departments or Indian Health Service clinics serving American Indian communities in Wisconsin, Minnesota, and North Dakota. Spirit of EAGLES (SOE) initiated the project to evaluate the use of *Cancer Information Resources for Native Americans*, a notebook published by the University of Wisconsin Comprehensive Cancer Center (UWCCC) in 1999, and later broadened it to include cancer information sources used by this group of health professionals.

Methods

SOE staff drafted the specific survey questions with the assistance of the UWCCC Survey Research Shared Service. The survey consisted of fourteen questions, formatted as yes/no items or using Likert scaling. The SOE program director identified an initial pool of 31 health professionals serving facilities visited through the SOE program between January 2001 and December 2003. Two of the original 31 potential respondents declined to participate, each suggesting a colleague they thought would be more appropriate to the survey's focus on cancer. These two health professionals were notified by letter, and added to the pool, bringing it to a total of 33 potential respondents. Twenty-five (76%) of the potential respondents participated in the survey.

Results

Survey respondents were asked to describe their job by choosing one or more of the following professional functions: administrative, clinical, and/or educational. Sixteen respondents stated their position included an administrative function, thirteen a clinical function, and nine an educational function. A majority of the respondents (14/25 or 56%) had between ten and twenty years experience in their present professional position, and an additional five respondents had between five and ten years experience.

Respondents were asked the relative difficulty of finding cancer information for their professional use on a scale of one (least difficult) to five (most difficult). Eight respondents reported little difficulty in finding cancer information, one reported a great deal of difficulty, and the remainder fell between; the mean was 2.36. Respondents were also asked how often clients requested information about cancer. Their response to the five options given was roughly bimodal: daily (2), weekly (8), monthly (4), rarely (9), and not at all (1).

Respondents were asked if they ever sought information on eight broad cancer topics. The topics and response rate were: prevention (96%), trends and statistics (88%), specific cancers (88%), screening (88%), resources/resource providers (80%), treatment (64%), diagnosis (56%), and clinical trials or studies (24%).

When locating cancer information for their professional use, respondents used websites (92%), local medical personnel (80%), brochures/booklets (72%), media sources (40%), local libraries (24%), and "other" sources. When referring clients to sources of cancer information, respondents used brochures/booklets (91%), local medical personnel (91%), websites (57%), media sources (24%), local libraries (10%), and "other" sources.

The set of responses to the "other" sources option were classified into broad groups for reporting purposes. When seeking cancer information for themselves, respondents used books, medical journals, and other publications (32%) and other medical personnel (20%). When referring clients to sources of cancer information, respondents used other medical personnel (10%) and 1-800 numbers (10%).

As a follow-up, respondents were asked to select which one cancer information source they preferred to use most in both circumstances. Websites was the respondents' preferred source for themselves, while brochures/booklets were preferred for clients.

Respondents were asked whether they sought information from five particular cancer-focused organizations for themselves and for clients. The five organizations, and the percentage of respondents who used them for themselves were: the American Cancer Society (72%), National Cancer Institute (72%), Spirit of EAGLES (72%), Native Circle (64%), and the Cancer Information Service (24%). When referring others, the respondents used the American Cancer Society (91%), National Cancer Institute (48%), Native Circle (33%), Spirit of EAGLES (33%), and the Cancer Information Service (29%).

When asked about "other" organizations used as a cancer information resource for themselves, respondents reported specific cancer centers (24%), state health department programs (20%), the Indian Health Service (12%), and the Centers for Disease Control and Prevention (12%). Respondents also cited several "other" organizations to whom they refer clients; with specific cancer centers (10%) reported most often.

Finally, respondents were asked about a UWCCC resource notebook, *Cancer Information Resources for Native Americans* distributed to their facility. Nine of the twenty-five (36%) respondents were familiar with the notebook, and two of twenty-five (8%) had used it.

Fourteen respondents made post-interview comments when asked for additional comments at the conclusion of the survey. Among the comments, the following three were specific to cancer information: 1) more cancer resources were generally necessary, 2) there are not enough American Indian-specific cancer resources, and 3) the application of this research would be useful in identifying cancer information needs for American Indian communities.

Discussion

The following three points were most noteworthy in the survey results: 1) there is a low level of interest in the topic of cancer clinical trials, 2) there is a low level of familiarity with the UWCCC notebook, and 3) there was a distinction between what cancer information resources the respondents use for themselves versus those to which they refer clients. Over 90% of respondents use websites for themselves, and nearly 70% said they use websites the most. When referring clients to cancer information, over 90% of respondents use brochures/booklets and local medical personnel, and almost 50% used brochures/booklets the most.

In addition, there was a high degree of respondent interest in the survey, as evidenced by the number of post interview comments and the volume of information volunteered when questions included an "other" category.

While this survey had several interesting findings, it is important to recognize its limitations. First, the respondents were selected for participation in the survey; second, they represent a very specific group of health professionals; and third, the small number of respondents (25) limits the applicability of the findings.

Conclusion

Both health professionals serving American Indian communities and their clients would benefit from greater availability and ease of access to American Indian-specific cancer information. A website containing resources and links for the health professional, as well as downloadable brochures for clients, would aid in meeting the primary resource preferences identified in this survey.

Editor's note: A more detailed version of this report may be obtained by contacting Rick Strickland, Spirit of EAGLES: American Indian and Alaskan Native Leadership Initiative on Cancer Control and Outreach, WARF 370, 610 N. Walnut St., Madison, Wisconsin 53726; e-mail strickla@uwccc.wisc.edu*; telephone (608) 262-0072.*

Your Cubby Can Keep You Up to Date

Diane Cooper, Biomedical Librarian/Informationist, Health Services Research Library, National Institutes of Health Library, Bethesda, Maryland

Are you the "go-to" person for a special topic? Do your colleagues come to you for help when they have a question about diabetes in pregnancy, or treatment of heart failure, or some other specific subject? Or, do you just have a continuing special interest in a narrow clinical field? If you answered "yes" to any of these questions, you probably want to keep up with the latest articles published in your field of interest. You may want to know about new publications automatically and in a timely way, and now you can. You can receive a list of relevant articles with abstracts regularly in your e-mail.

My NCBI (Cubby) allows you to create a search strategy in PubMed, the search service for MEDLINE. You can save it, and have it run automatically with results sent to you however frequently you desire. Here are the steps. Go to the familiar Pub Med site, *www.pubmed.gov*. Scroll down the left side panel and click "MY NCBI." Now, this is important: you need to click on *My NCBI* and not *Cubby* at this point. If you have saved searches before, and want to make them run automatically, click on *Cubby*.

Step 1: My NCBI: Register

1. Click on "sign in."
2. In the sign-in box, click "Register for an Account" (you do this only once).
3. Enter a user name (3 - 10 alpha-numeric characters) and a password (6 - 8 alpha-numeric characters).
4. Choose a security question and answer so your password can be reset if you forget it.
5. Enter your e-mail address. This e-mail address will be used for automatic e-mail alerts and your updates.
6. Click on REGISTER.

A confirmation e-mail message will be sent to your e-mail address. After you reply, you are ready to run your search and save it for the automatic e-mail-updates.

Step 2: Generate a search strategy in PubMed and save for e-mail updates

Once you receive your confirmation e-mail message, you can create a search and set up the automatic e-mail update parameter.

1. Click on *My NCBI*.
2. Sign in with your newly created "user name" and "password."
3. Create a search strategy in the PubMed search box. It is easy: just type in a subject. If you are entering two subjects use AND between the two terms (for example: heart failure AND pregnancy). You probably want to be as narrow as you can to prevent being overwhelmed by off-target citations.
4. Don't forget to click on LIMITS. In limits you can select:
   - English language.
   - Type of article, such as clinical guideline, review, meta-analysis, randomized controlled trials, etc.
   - Do not worry about the date range. You will automatically receive only the current citations.
   - Subsets allow specific groups of journals to be searched such as AIDS journals, Dental journals, or Core journals. Core journals are 120 clinical journals that were formerly in Abridged Index Medicus.

You may want to specify only a handful of journals that interest you. You can type the journal/s abbreviations in the search box along with your subject terms. To find the proper journal abbreviations go *www.pubmed.gov* and scroll down to JOURNAL database. Type the journal title in the search box to retrieve the correct journal abbreviation.

Each journal abbreviation you use in your My NCBI search must be followed by the qualifier [ta]. You will want to "OR" all journal abbreviations together within a parenthesis to group the titles together.

Here are some examples:

New England Journal of Medicine = **N Engl J Med [ta]**
Journal of the American Medical Association = **JAMA [ta]**
Lancet = **Lancet [ta]**
British Medical Journal = **Br Med J [ta]**
Family Practice = **Fam Prac [ta]**
Annals Internal Medicine = **Ann Intern Med [ta]**

Here is a sample search:
Heart Failure AND pregnancy AND (N Engl J Med [ta] OR Fam Prac [ta] OR Lancet [ta] OR Br Med J [ta]).

Click the **Save Search** link next to the query box Clear button. A separate window will open to prompt you for additional information about the search strategy you are saving.

5. Name your search strategy, using fewer than 100 characters, so you can identify it if you set up more than one. The name of the saved search will be included in the subject of the automatic e-mail update messages.
6. Be sure to click **Yes** to receive **automatic e-mail updates** of new search results.
7. Enter an address in the **e-mail box** if it is empty. This address will be used for all e-mail updates for the account.
8. How often? You can select daily, weekly, or monthly delivery of updates.
9. Select the number of citations (up to 500) that you want to see each time.
10. Select a **Format** and either HTML or Text. Select HTML for general viewing and printing. Select Text if you want to save the citations to a bibliographic software program such as Reference Manager or Endnote. Don't worry, though, when you get the results, you can switch formats as desired.
11. Click OK to store your search.
12. You are now done. Just sit back and wait for your first update to arrive in your e-mail on the day you designated in your set up.

Here is a tip: to avoid being swamped with less important publications, limit your search to a handful of journals, e.g., those that you would pick up and read in the library.

If you have any questions or need help setting up your new alert service, call me at (301) 594-2449, or e-mail me at *cooperd@mail.nih.gov*.

OKCIC Diabetes Prevention Camp ("Turtle Camp") Quality Improvement Project Summary

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Introduction

Diabetes is a disease that affects the body's ability to produce or respond to insulin, a hormone that allows blood glucose to enter the cells of the body and be used for energy. Diabetes falls into two main categories: type 1, which usually occurs during childhood or adolescence, and type II, the most common form of the disease, which usually occurs after age forty. For more background information, go to *http://www.aaip.com/resources/diabetesamongna.html.*

Diabetes is the fifth deadliest disease in the United States, and it has no cure. The total annual economic cost of diabetes in 2002 was estimated to be $132 billion, or one out of every ten health care dollars spent in the US. Today, diabetes has reached epidemic proportions among Native Americans. Complications from diabetes are major causes of death and health problems in most Native American populations. On average, Native Americans are 2.2 times more likely to have a diagnosis of diabetes than are non-Hispanic whites of similar age. Please go to *http://www.diabetes.org/diabetes-statistics/native-americancs.jsp.*

The good news is that the recently completed Diabetes Prevention Program study conclusively showed that people can prevent or delay the development of type 2 diabetes by making changes in their diet and increasing their level of physical activity. See *http://www.diabetes.org/diabetes-prevention.jsp.*

The Oklahoma City Indian Clinic (OKCIC) Public Health Department and the OKCIC BRAID (Becoming Responsible American Indians with Diabetes) Team joined forces to establish a diabetes prevention camp for youth ages eight to eleven. An intensive two-day day camp was implemented, and continuous follow-up and interaction with both the children and their parents was started. The children were then reunited six months later to determine the efficacy of the program.

Specific goals and objectives were designed to measure the program's success, as follows:

Goal 1. Increase participant knowledge of diabetes and diabetes prevention by 10% from baseline value.

Objective 1. Provide participants with sixty minutes of age-appropriate education about diabetes in two thirty-minute sessions.

Objective 2. Provide participants with ninety minutes of age-appropriate education about these three areas: Eat Right, Be Active, and Don't Smoke.

Goal 2. Increase the number of children who exhibit behavior change over a six-month period from baseline value.

Objective 1. Provide participants with thirty minutes of age-appropriate education on why behavior change is important to prevent Diabetes.

Objective 2. Assist the participants with setting one behavior change goal and provide encouragement.

Step 1: Problem Identification

Although type 2 diabetes is a problem among youth, national data to monitor trends among youth are not available. Clinic-based reports and regional studies indicate that type 2 diabetes is becoming more common among children and adolescents, particularly in American Indians, African Americans, and Hispanic/Latinos. Please see *http://www.cdc.gov/diabetes/pubs/estimates.htm*.

Diabetes prevention camps have been conducted at the OKCIC for a few years, but data have not been analyzed to determine if the children participating made any lifestyle changes.

Step 2: Evaluation of Concerns

Diabetes is being diagnosed at younger ages, and Native Americans are at increased risk of developing diabetes. Research has proven that healthy lifestyle changes can prevent or delay the onset of diabetes.

Step 3: Measures Implemented

Initially

- Two-day intensive diabetes education camp
  - Provided age-appropriate education:
    - Diabetes
    - Healthy nutrition
    - Physical activity
    - Smoking
    - Behavior change and its role in diabetes prevention
  - Pre-test and post-test to measure percentage of knowledge gained
  - Parent meeting
  - Initial assessments
    - Height/weight
    - BMI
    - Presence of Acanthosis Nigracans
    - Blood pressure
    - Behavior risk assessment
  - Satisfaction survey

Follow-up educational packets/incentives for parents and kids were mailed every 4 - 6 weeks throughout the six-month time period for encouragement and reinforcement.

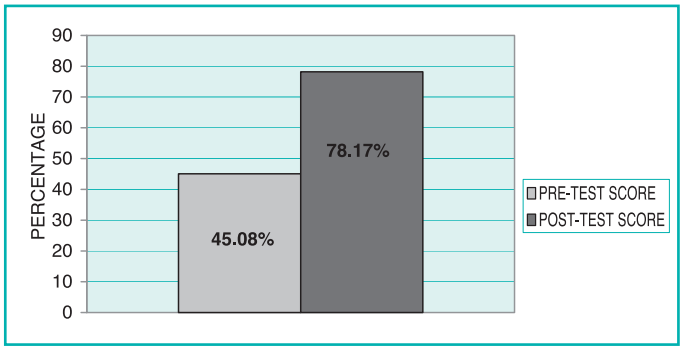
Six months later

- Saturday morning refresher education
  - Provided follow-up education:
    - Diabetes
    - Healthy nutrition
    - Physical activity
    - Smoking
    - Behavior change and its role in diabetes prevention
  - Parent meeting
  - Follow-up assessments
    - Height/weight
    - BMI
    - Presence of Acanthosis Nigracans
    - Blood pressure
    - Behavior risk assessment
- Satisfaction survey
- Parent survey

Step 4: Reevaluate to Demonstrate Improvement

This graph in Figure 1 shows that the children's post-test scores on tests of knowledge about diabetes and diabetes prevention increased by 33 percentage points as a result of our education at camp. This in turn tells us that we met Goal 1: to increase participant knowledge of diabetes and diabetes prevention by 10% over baseline value.

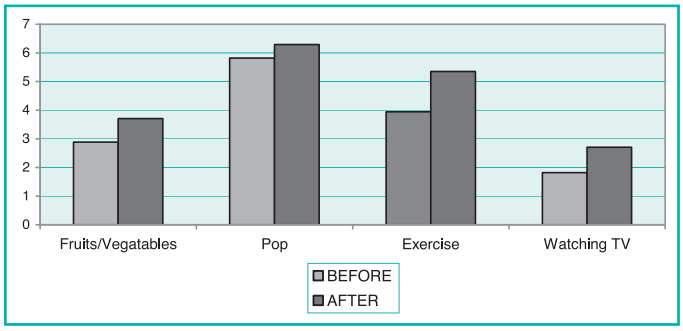
Figure 1. 2004 Turtle Camp pre-test/post-test results



Comparison of Behavior Change Data after the Reunion

TURTLE Camp participants and parents were reunited for a six month follow-up in January 2005. Nineteen children and eleven parents attended the reunion. The children enjoyed granola bars and fruit for breakfast as follow-up assessments were completed. Each child's blood pressure, height, and weight was measured and compared to their results in July 2004. In addition, each child also completed a follow-up behavior change survey to identify changes in behavior since last summer's TURTLE Camp. Results of the behavior change survey revealed that on average there was improvement on all four questions in regards to healthy behaviors (see Figure 2). This in turn tells us that our Goal 2 was achieved: to increase the number of children who exhibit behavior change over a six-month period from baseline value.

Figure 2. Improvements in healthy behaviors

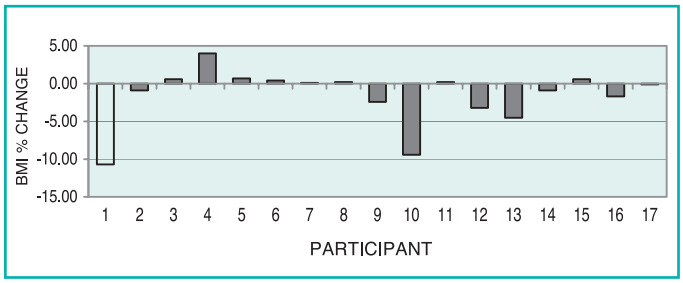


The graph depicts the behavior change improvement as measured from zero to seven. Zero is the most unhealthy behavior and seven represents the most healthy behavior, so the higher the score, the healthier the behavior.

Body Mass Index-for-age Comparison from the Reunion

Nine of the seventeen (53%) of the children who attended the reunion showed a decrease in their body mass index-for-age, according to CDC growth charts. Of the remaining eight children, 88% of them showed a body mass index-for-age increase of less than 1% (see Figure 3).

Figure 3. Change In body mass index-for-age for Turtle Camp 2004 reunion kids



Step 5: Reporting Efforts

- Various articles in OKCIC newsletter.
- Preliminary progress reports to BRAID committee monthly throughout program.
- Summary report to Children's Health committee, BRAID committee, and Administration in March 2005.
- Submitted project summary report to the Health Promotion and Disease Prevention consultant at IHS Headquarters in Rockville, Maryland to be included in a national report of current obesity prevention programs.
- Presented project summary to Quality Improvement committee at OKCIC in March 2005.
- Poster presentation in clinic lobby in April 2005.
- Follow-up presentation to camp participants and parents at the 2005 Diabetes Prevention Camp in June 2005.

Available Training Resources

Lori de Ravello, MPH, and Laura Shelby, CDC assignees to the IHS Division of Epidemiology, Albuquerque, New Mexico

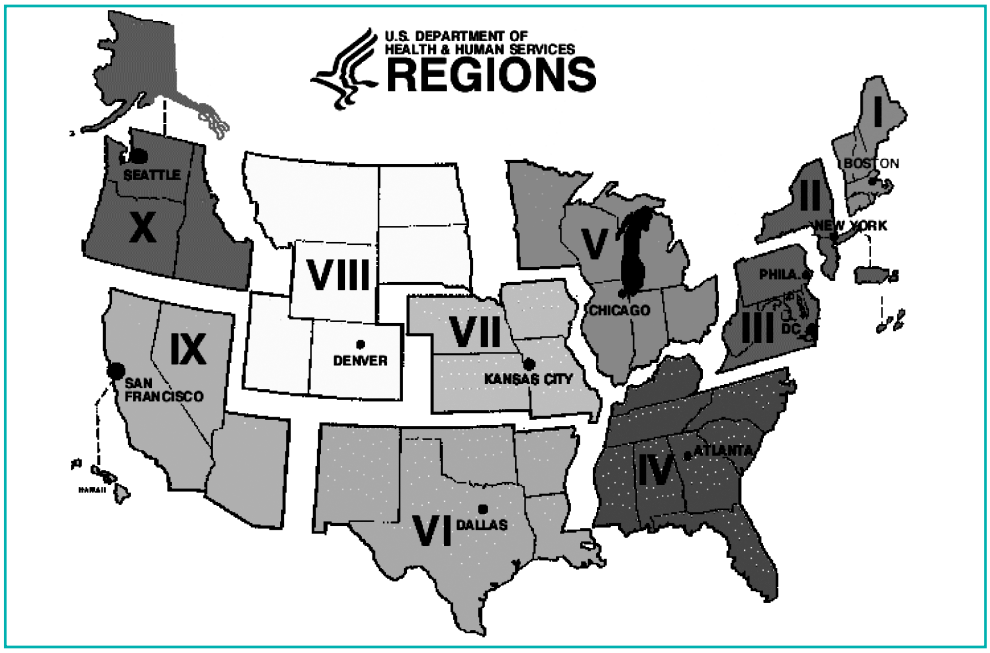
In the November 2004 issue of *The IHS Primary Care Provider*, the National STD Program presented an array of on-line STD prevention and control materials and resources. One of the most important resources was the Centers for Disease Control and Prevention (CDC) funded National Network of STD/HIV Prevention Training Centers (NNPTC). The PTCs are only one of several federally funded training centers that IHS can call upon for training and technical support. In this article, we present three additional federally funded training centers: the CDC and OPA funded Regional Training Centers for Family Planning (RTCs), the HRSA funded AIDS Education and Training Centers (AETCs), and the SAMHSA funded Addiction Technology Transfer Centers (ATTCs).

The Office of Population Affairs' Office of Family Planning has funded RTCs for over 25 years to provide training to Title X family planning clinic providers. Since the late 1980s, CDC's Division of Reproductive Health has funded the RTCs to integrate HIV prevention training into their course offerings and hands-on technical assistance. Although CDC and OPA are key supporters of the RTCs, they are non-profit organizations that receive funding from many different sources for a wide array of health and human service training and technical assistance. Several RTCs have projects with tribes and IHS Areas.

Each RTC website has detailed descriptions of the training and technical assistance they offer, resources and tools, and contact information. To find the RTC that corresponds to your state, identify which DHHS region you are in on the map above, and go to the corresponding RTC's website in the table to the left.

To learn more about Office of Population Affairs and Title X programs, visit *http://opa.osophs.dhhs.gov/titlex/ofp.html*. To learn more about CDC's Division of Reproductive Health, visit *www.cdc.gov/reproductivehealth*.

Regional Training Centers for Family Planning (RTCs)



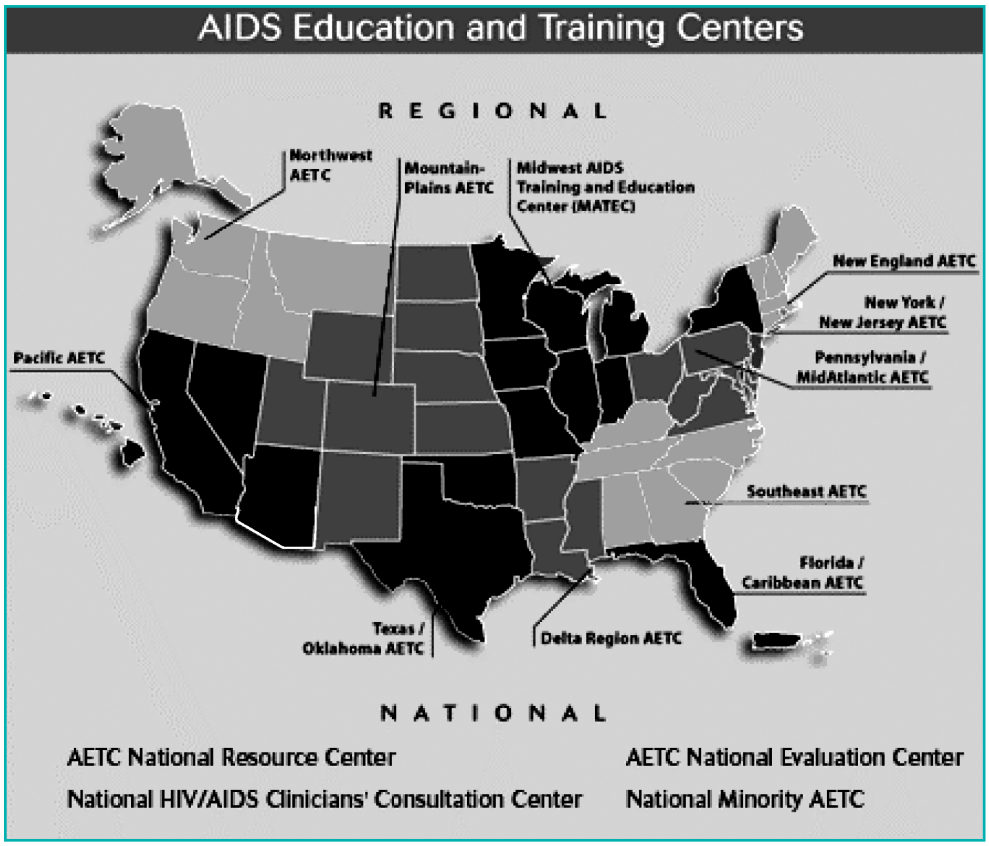
Region	RTC	Website
I	John Snow Inc.	*http://www.famplan.org/*
II*	Cicatelli Associates, Inc. Planned Parenthood of New York City	*http://www.cicatelli.org/TitleX/home.htm* *http://www.ppnyc.org/services/training.html*
III	Family Planning Council	*http://www.familyplanning.org/pages/trainingcap.htm*
IV	Emory University	*http://www.gynob.emory.edu/rtc/index.cfm*
V*	Health Care Education and Training MPRES	*http://www.hcet.org/projects.htm* *http://www.mpres.org/*
VI	Center for Health Training	*http://www.centerforhealthtraining.org/*
VII	Development Systems Inc.	*http://www.devsys.org/html/main.html*
VIII	John Snow Inc.	*http://www.region8familyplanning.org/*
IX	Center for Health Training	*http://www.centerforhealthtraining.org/*
X	Center for Health Training	*http://www.centerforhealthtraining.org/*

**OPA funds 10 RTCs, one in each DHHS Region; CDC eight of the same RTCs as OPA, plus two OPA does not fund (in Regions II and V).*

AIDS Education and Training Centers (AETCs)

The AETC Program, part of the Ryan White CARE Act, currently supports a network of eleven regional training centers and more than 130 "local performance sites." Together, they conduct targeted, multi-disciplinary education and training programs for healthcare providers treating persons with HIV/AIDS. The mission of the AETC is to improve the quality of life of patients living with HIV/AIDS through the provision of high quality professional education and training. The AETC Program is administered by the Health Resources and Services Administration (HRSA), HIV/AIDS Bureau.

In addition to an AETC National Resource Center website (*http://www.aids-etc.org/*), each AETC website has detailed descriptions of the training they offer, resources, and contact information. To find the AETC that corresponds to you, locate your state on the map below and then find the corresponding AETC website in the table below.



Training Center	Organization	Website
Delta Region	Louisiana State University	*http://www.deltaaetc.org/*
Florida/Caribbean	University of South Florida	*http://www.faetc.org/*
Midwest	University of Illinois at Chicago	*http://www.uic.edu/depts/matec/*
Mountain Plains	University of Colorado	*http://www.mpaetc.org/*
New England	University of Massachusetts	*http://www.neaetc.org/*
New York/New Jersey	Columbia University	*http://www.nynjaetc.org/*
Northwest	University of Washington	*http://depts.washington.edu/nwaetc/*
Pacific	University of California San Francisco	*http://www.ucsf.edu/paetc/*
Pennsylvania/MidAtlantic	University of Pittsburgh	*http://www.pamaaetc.org/*
Southeastern	Emory University	*http://www.seatec.emory.edu/*
Texas/Oklahoma	Parkland Health and Hospital System	*http://www.aidseducation.org/*

To find out more about the Health Resources and Services Administration, visit *http://www.hrsa.gov/*. To find out more about the Ryan White CARE Act, visit *http://hab.hrsa.gov/history.htm*.

Addiction Technology Transfer Centers (ATTCs)

ATTC	Organization	Website
Caribbean Basin and Hispanic	Universidad Central del Caribe	*http://cbattc.uccaribe.edu/english/home.htm*
Central East	Danya Institute	*http://www.ceattc.org/*
Great Lakes	University of Illinois at Chicago	*http://www.uic.edu/depts/matec/glattc/*
Gulf Coast	University of Texas	*http://www.utexas.edu/research/cswr/gcattc/*
Mid-America	University of Missouri-Kansas City	*http://www.mattc.org/index.asp*
Mid-Atlantic	Virginia Commonwealth University	*http://www.mid-attc.org/*
Mountain West	University of Nevada-Reno	*http://casat.unr.edu/mwattc/*
New England	Brown University	*http://www.attc-ne.org/*
Northeast	Institute for Research, Education & Training in Addictions	*http://www.neattc.org/*
Northwest Frontier	Oregon Health and Science University	*http://www.nfattc.org/*
Pacific Southwest	University of California Los Angeles	*http://www.psattc.org/home.html*
Prarielands	University of Iowa	*http://www.public-health.uiowa.edu/pattc/*
Southeast	Morehouse School of Medicine	*http://www.sattc.org/webdocs/jsp/main/index.jsp*
Southern Coast	Florida Certification Board	*http://www.scattc.org/*

The 14 ATTCs were established in 1993 by the Substance Abuse and Mental Health Services Administration (SAMHSA) to identify and advance opportunities for improving addiction treatment. The Prairielands and Mountain West ATTCs have a particular focus on AI/AN addiction issues.

As with the other training centers, each ATTC website provides more information on their training offered, resources, and contact information. To find your corresponding ATTC, determine which regional center serves your state and locate that center's website on the table below.

The IHS National STD Program would be happy to serve as liaison between you and any of these training centers. Please let us know how we can help get you any related training and technical assistance support you need. For more information, contact Lori de Ravello, telephone (505) 248-4202; e-mail *lori.deravello@ihs.gov*.

NCME VIDEOTAPES AVAILABLE ☐

Health care professionals employed by Indian health programs may borrow videotapes produced by the Network for Continuing Medical Education (NCME) by contacting the IHS Clinical Support Center, Two Renaissance Square, Suite 780, 40 North Central Avenue, Phoenix, Arizona 85004.

These tapes offer Category 1 or Category 2 credit towards the AMA Physician's Recognition Award. These CME credits can be earned by viewing the tape(s) and submitting the appropriate documentation directly to the NCME.

To increase awareness of this service, new tapes are listed in The IHS Provider *on a regular basis.*

NCME #845

Alzheimer's Disease; Clearing Up Confusion *(60 minutes)* Alzheimer's disease (AD), the most common form of dementia, is a fatal, progressive neurodegenerative disorder. However, early detection and intervention can help mitigate the patient's deterioration and ease the strain that AD places on the patient's family and caregivers. In this program, Dr. Lombard offers insights into early detection and clinical evaluation of patients with AD, including interpretation of imaging studies. He also reviews current treatment strategies and discusses supportive care. The program concludes with a case presentation, in which Dr. Lombard interviews an actual patient with AD.

NCME #846

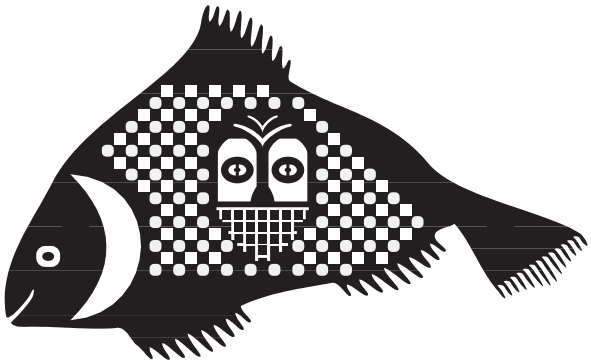
Polypharmacy in the Aged *(60 minutes)* Polypharmacy in the aged is a major patient safety issue in the United States today. Medication errors due to polypharmacy can involve severe and even life-threatening side effects or drug interactions. This video reviews the causes of polypharmacy in the elderly and identifies patients who are at risk for medication errors due to polypharmacy. It also discusses steps that primary care physicians can take to reduce the risk for medication errors in elderly patients who are taking multiple drugs to treat coexisting conditions. The use of a handheld electronic device such as a personal digital assistant (PDA) to assess potential medication errors is emphasized, as is the vital role of the pharmacist in helping to identify medications that are more likely to cause severe adverse effects or drug interactions in the elderly. Two hypothetical patient cases based on real-life situations are presented to illustrate how to assess and manage elderly patients who are at risk for polypharmacy-related adverse effects. Tips for educating elderly patients and their caregivers on how to avoid complications from prescription drugs and from over-the-counter medications and herbal agents also are provided.

NCME #847

Joint Replacement: Considerations for Replacing Worn-out Hips and Knees *(60 minutes)* Arthritis is the most common cause of chronic pain and disability related to hip and knee joints. Approximately 40 million Americans have clinically significant arthritis, including more than half of people under age 65. Treatment of arthritis usually begins with medical interventions to prevent or reduce arthritis-related pain. When nonoperative measures are ineffective, surgery becomes an important treatment consideration. This video explains how to diagnose arthritis of the hip or knee based on the patient history and physical examination, and reviews the nonsurgical and surgical treatment options available to patients. The benefits and risks of osteotomy and joint fusion, and of the gold-standard operative treatment for arthritis – joint replacement – are discussed in detail. The video concludes with an illustration of the newest form of surgical intervention, minimally invasive total joint replacement, and a review of its advantages and disadvantages.

NCME #848

Restless Legs Syndrome *(60 minutes)* Restless legs syndrome (RLS) is a common, progressive, treatable neurologic disorder that is underdiagnosed. It is characterized by dyesthesias, or uncomfortable sensations in the legs, which occur primarily while at rest or during sleep. A variety of medical conditions may cause similar symptoms, thus complicating diagnosis. In some cases, the symptoms of RLS abate spontaneously and do not return; however, in most cases, the symptoms worsen. This video program reviews the epidemiology, pathophysiology, clinical features, and potential sequelae of RLS. Two hypothetical cases are used to illustrate how to accurately diagnose the disorder and determine the appropriate treatment. The video also discusses issues in the management of RLS in children and in cognitively impaired old adults.



Editor's Note: The following is a digest of the monthly Obstetrics and Gynecology Chief Clinical Consultant's Newsletter (Volume 3, No. 6, June 2005) 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

Have you had your 'morning after' antiretroviral cocktail yet? When highly active antiretroviral therapy (HAART) is prescribed within 48 to 72 hours of nonoccupational exposure to human immunodeficiency virus (HIV) and continued for 28 days, the likelihood of transmission may be reduced. The earlier the nonoccupational postexposure prophylaxis (nPEP) is administered, the higher the chance that it will interrupt transmission.

Recent data from human and animal studies, case reports, and documentation of the use of nPEP prompted the US Department of Health and Human Services (DHHS) to update its recommendation for the use of nPEP in patients who seek treatment within 72 hours of high-risk exposure to a person known to be HIV positive.

No specific antiretroviral medication or combination is optimal for nPEP. However, preferred regimens include efavirenz and lamivudine or emtricitabine with zidovudine or tenofovir (as a nonnucleoside-based regimen) and lopinavir and ritonavir (coformulated in one tablet) and zidovudine with either lamivudine or emtricitabine. No evidence suggests that a three-drug HAART regimen is more effective than a two-drug regimen. When the source person is available for interview, his or her medication history and most recent viral load measurement should be considered when choosing medications for nPEP. This could help prevent prescription of medications to which the virus is already resistant.

All patients seeking treatment after HIV exposure should be tested for antibodies at baseline, four to six weeks, three months, and six months. Patients should be informed about the signs and symptoms of acute retroviral infection and should be asked to return for evaluation if these occur. Physicians who provide nPEP also should monitor patients' liver function, renal function, and hematologic parameters.

When a patient's risk of transmission from contact is small, or when more than 72 hours have passed since exposure, nPEP is not recommended. However, when a patient seeks treatment more than 72 hours after exposure, but the risk of virus transmission is severe, physicians may decide that the potential benefit of nPEP is greater than the potential risk of complications from antiretroviral therapy.

HIV Status of Source

Patients who have had sexual, injection-drug-use, or other nonoccupational exposures to potentially infectious fluids of persons known to be HIV infected are at risk for acquiring HIV infection and should be considered for nPEP if they seek treatment within 72 hours of exposure. If possible, source persons should be interviewed to determine his or her history of antiretroviral use and most recent viral load because this information might provide information for the choice of nPEP medications.

Persons with exposures to potentially infectious fluids of persons of unknown HIV status might or might not be at risk for acquiring HIV infection. When the source is known to be from a group with a high prevalence of HIV infection (e.g., a homosexual or bisexual man, an injection-drug user, or a commercial sex worker), the risk for transmission might be increased. The risk for transmission might be especially great if the source person has been infected recently, when viral burden in blood and semen might be particularly high. However, ascertaining this in the short time available for nPEP evaluation is rarely possible. When the HIV status of the source is unknown, it should be determined whether the source is available for HIV testing. If the risk associated with the exposure is considered substantial, nPEP can be started pending determination of the HIV status of the source and then stopped if the source is determined to be noninfected.

Pregnant Women and Women of Childbearing Potential

Considerable experience has been gained in recent years in the safe and appropriate use of antiretroviral medications during pregnancy, either for the benefit of the HIV-infected woman's health or to prevent transmission to newborns. To facilitate the selection of antiretroviral medications likely to be both effective and safe for the developing fetus, clinicians should consult DHHS guidelines before prescribing nPEP for a woman who is or might be pregnant.

Because of potential teratogenicity, efavirenz should not be used in any nPEP regimen during pregnancy or among women of childbearing age at risk for becoming pregnant during the course of antiretroviral prophylaxis. A protease inhibitor- or nucleoside reverse transcriptase inhibitor-based regimen should be considered in these circumstances. When

efavirenz is prescribed to women of childbearing potential, they should be instructed about the need to avoid pregnancy. Because the effect of efavirenz on hormonal contraception is unknown, women using such contraception should be informed of the need to use an additional method (e.g., barrier contraception). In addition, because of reports of maternal and fetal mortality attributed to lactic acidosis associated with prolonged use of d4T in combination with ddI in HIV-infected pregnant women, this combination is not recommended for use in an nPEP regimen.

Evaluation for Sexually Transmitted Infections, Hepatitis, and Emergency Contraception

Evaluation for sexually transmitted infections is important because these infections might increase the risk for acquiring HIV infection from a sexual exposure. In 1996, an estimated 5,042 new HIV infections were attributable to sexually transmitted infection at the time of HIV exposure. In addition, any sexual exposure that presents a risk for HIV infection might also place a patient at risk for acquiring other sexually transmitted infections, including hepatitis B. Prophylaxis for sexually transmitted disease, testing for hepatitis, and vaccination for hepatitis B (for those not immune) should be considered.

For women of reproductive capacity who have had genital exposure to semen, the risk for pregnancy also exists. In these instances, emergency contraception should be discussed with the potentially exposed patient.

Summary

The most effective means of preventing HIV infection is preventing exposure. The provision of antiretroviral drugs to prevent HIV infection after unanticipated sexual or injection-drug-use exposure might be beneficial. The DHHS Working Group on Nonoccupational Postexposure Prophylaxis made the following recommendations for the United States. For persons seeking care ≤ 72 hours after nonoccupational exposure to blood, genital secretions, or other potentially infectious body fluids of a person known to be HIV infected, when that exposure represents a substantial risk for transmission, a 28-day course of highly active antiretroviral therapy (HAART) is recommended. Antiretroviral medications should be initiated as soon as possible after exposure. For persons seeking care ≤ 72 hours after nonoccupational exposure to blood, genital secretions, or other potentially infectious body fluids of a person of unknown HIV status, when such exposure would represent a substantial risk for transmission if the source were HIV infected, no recommendations are made for the use of nPEP. Clinicians should evaluate risks and benefits of nPEP on a case-by-case basis. For persons with exposure histories that represent no substantial risk for HIV transmission or who seek care > 72 hours after exposure, DHHS does not recommend the use of nPEP. Clinicians might consider prescribing nPEP for exposures conferring a serious risk for transmission, even if the person seeks care > 72 hours after exposure if, in their judgment, the diminished potential benefit of nPEP outweighs the risks for transmission and adverse events. For all exposures, other health risks resulting from the exposure should be considered and prophylaxis administered when indicated. Risk-reduction counseling and indicated intervention services should be provided to reduce the risk for recurrent exposures.

Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug Use, or Other Nonoccupational Exposure to HIV in the United States. *MMWR*. January 21, 2005/Vol. 54/No. RR—2.

OB/GYN CCC Editorial comment

Nonoccupational postexposure prophylaxis (nPEP) is a potentially life saving method that the Indian health system should incorporate into clinical practice in Indian Country. The earlier the nPEP is administered, the higher the chance that it will interrupt transmission**.** It should be incorporated into selected post coital contraception or alleged sexual assault, among other acute post coital encounters.

When the HIV status of the source is not known and the patient seeks care within 72 hours after exposure, DHHS does not recommend for or against nPEP but encourages clinicians and patients to weigh the risks and benefits on a case-by-case basis.

The Indian health system should also take advantage of these types of 'teachable moments' to emphasize preconception folic acid therapy, safer sex techniques, and other sexually transmitted infections (STIs).

When a patient's risk of transmission from contact is small or when more than 72 hours have passed since exposure, nPEP is not recommended. However, when a patient seeks treatment more than 72 hours after exposure, but the risk of virus transmission is severe, physicians may decide that the potential benefit of nPEP is greater than the potential risk of complications from antiretroviral therapy.

Lastly, in follow up to the March 2005 CCC Corner Abstract of the Month, the Clinical Reporting System Project Team has completed a comprehensive document approach about HIV screening in pregnancy in Indian Country. The document outlines how the 'opt out' approach to prenatal HIV screening can be implemented.

From Your Colleagues

Zelda Collett-Paule, Anchorage

Why Prozac is all right during pregnancy but not while breast-feeding . . . and why Zoloft is. Prozac use during pregnancy has been well studied, and many new mothers are already taking it at delivery. Its use during breast-feeding is controversial, however. Fluoxetine's long half-life and potential for accumulation in breast milk has prompted some recommendations to avoid its use in women who are breast-feeding young infants.

Sertraline (Zoloft) is likely to be the safest choice among the SSRIs because it has been studied extensively and because drug levels found in nursing infants are usually minimal.

Spencer JP, Gonzalez LS, Barnhart DJ. Medications in the breast-feeding mother. *Am Fam Physician*. 2001 Jul 1;64(1):119-26.

Ruddock B. Antidepressant use and breast-feeding – focus on patient care. *CPJ/RPC*. 2004 October Vol.137,No.8:39-41.

George Gilson, Anchorage

Is gestational diabetes mellitus just a diagnosis waiting for a disease? No, there is recent evidence from this blinded, matched control study that shows untreated gestational diabetes mellitus carries significant risks for perinatal morbidity in all disease severity levels. Timely and effective treatment may substantially improve outcome.

Langer O, Yogev Y, Most O, Xenakis EM. Gestational diabetes: the consequences of not treating. *Am J Obstet Gynecol*. 2005 Apr;192(4):989-97.

OB/GYN CCC Editorial comment

In Hunter's 1985 letter he raised the issue of whether "Gestational diabetes is a diagnosis still looking for a disease." Two recent articles show that glucose intolerance in pregnancy is in fact associated with perinatal and neonatal morbidity.

The blinded study above reported by Langer et al showed untreated gestational diabetes mellitus carried significant risks for perinatal morbidity in all disease severity levels. In addition, Saydah et al found similar results from large, nationally representative survey data. The Saydah et al findings confirm that pregnancies in women with GDM are more likely to be associated with maternal medical complications compared with pregnancies in women without diabetes.

Saydah SH, Chandra A, Eberhardt MS. Pregnancy experience among women with and without gestational diabetes in the U.S., 1995 National Survey of Family Growth. *Diabetes Care*. 2005 May;28(5):1035-40.

Hunter DJ, Milner R. Gestational diabetes and birth trauma. [letter] *Am J Obstet Gynecol*. 1985 Aug 1;152(7 Pt 1):918-9.

Hot Topics

Obstetrics

Slight delay in umbilical cord clamping better for **preterm** infants. Cochrane for Clinicians: Putting Evidence into Practice. The clinical question was, What is the optimal time to clamp the umbilical cord for infants born at less than 37 weeks' gestation? The Evidence-Based Answer is as follows: In preterm infants, clamping the umbilical cord between 30 seconds and two minutes after delivery is associated with lower rates of blood transfusion and intraventricular hemorrhage.

Rabe H, et al. Early versus delayed umbilical cord clamping in preterm infants. Cochrane Database Syst Rev 2004;(3):CD003248

Gynecology

More effective than povidone iodine in vaginal hysterectomy: Chlorhexidine gluconate.

Conclusion: Chlorhexidine gluconate was more effective than povidone iodine in decreasing the bacterial colony counts that were found in the operative field for vaginal hysterectomy.

Although bacterial contamination may have a greater level of reduction in the chlorhexidine group, this does not guarantee a difference in postoperative infection. Among the 50 patients enrolled in this study, none of them were noted to have a postoperative infection. The authors also commented that if they were to structure the study to look at postoperative infections, they would have to enroll 814 patients in each arm to achieve a 50% reduction. Similar but larger studies may be helpful to assess whether chlorhexidine prep should become the standard prep for vaginal hysterectomies.

Culligan PJ et al A randomized trial that compared povidone iodine and chlorhexidine as antiseptics for vaginal hysterectomy. Am J Obstet Gynecol. 2005 Feb;192(2):422-5.

Features

ACOG

Urinary Incontinence in Women. Practice Bulletin Number 63, June 2005.

Summary of Conclusions and Recommendations

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

- Behavioral therapy, including bladder training and prompted voiding, improves symptoms of urge and mixed incontinence and can be recommended as a noninvasive treatment in many women.
- Pelvic floor training appears to be an effective treatment for adult women with stress and mixed incontinence and can be recommended as a noninvasive treatment for many women.
- Pharmacologic agents, especially oxybutynin and tolterodine, may have a small beneficial effect on improving symptoms of detrusor overactivity in women.

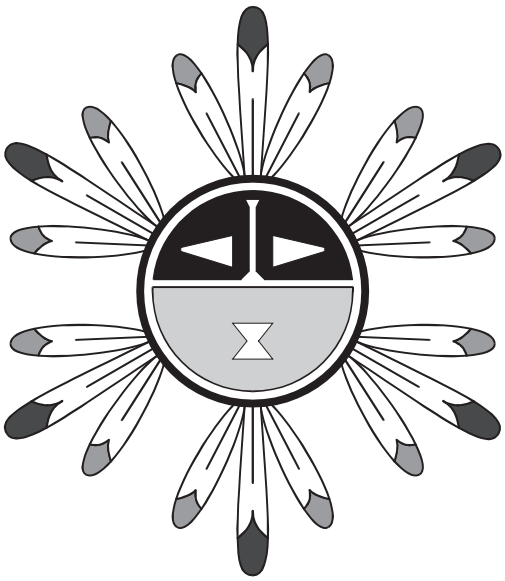
The following recommendations are based on limited or inconsistent scientific evidence (Level B):

- Cystometric testing is not required in the routine or basic evaluation of urinary incontinence.
- Bulking agents are a relatively noninvasive method of treatment for stress incontinence and can be used in women for whom any form of operative treatment is contraindicated.
- Long term data suggest that Burch colposuspension and sling procedures have similar objective cure rates; therefore, selection of treatment should be based on patient characteristics and the surgeon's experience.
- The combination of a hysterectomy and a Burch colposuspension does not result in higher continence rates than a Burch procedure alone.
- Tension-free vaginal tape and open Burch colposuspension have similar success rates.
- Anterior colporrhaphy, needle urethropexy, and paravaginal defect repair have lower cure rates for stress incontinence than Burch colposuspension.

The following recommendations are based primarily on consensus and expert opinion (Level C):

- After the basic evaluation of urinary incontinence, simple cystometry is appropriate for detecting abnormalities of detrusor compliance and contractibility, measuring postvoid residual volume, and determining capacity.
- Patients with urinary incontinence should undergo a basic evaluation that includes a history, physical examination, measurement of postvoid residual volume, and urinalysis.

Urinary incontinence in women. ACOG Practice Bulletin No. 63. American College of Obstetricians and Gynecologists. *Obstet Gynecol*. 2005;105:1533–45.



Hormone Replacement Update

Use of Soy Not effective for Menopausal Symptoms.

Conclusion: The available evidence suggests that phytoestrogens available as soy foods, soy extracts, and red clover extracts do not improve hot flushes or other menopausal symptoms.

Krebs EE, et al. Phytoestrogens for treatment of menopausal symptoms: a systematic review. *Obstet Gynecol*. October 2004;104:824-36.

Oklahoma Perspective, Greggory Woitte, Hastings Indian Medical Center

West Nile Virus in Women. After moving to Oklahoma, I quickly realized that the summer months were quite warm and humid due to the large storms of the early summer. In this warm humid climate, I found that the mosquitoes were quite plentiful. Over the past couple of years, the transmission of West Nile virus has been an equally hot topic when talking about mosquitoes. In spite of my perception of swarms of mosquitoes, only 24 cases of West Nile Virus were confirmed in Oklahoma during 2004. Despite this low number, the CDC encourages clinicians to keep West Nile virus in the differential when dealing with a woman presenting with unexplained fever or neurological illness.

OB/GYN CCC Editorial comment

Gregg's comments are very helpful because the effects of West Nile (WN) virus during pregnancy are new to all of us. Gregg had previously lived in Illinois, Virginia, and Bethesda, MD, yet in Oklahoma, he had gotten bitten by mosquitoes more frequently. Though Illinois had the largest number of West Nile virus cases while he was in residency, it was surprising that Oklahoma did not have the same proportion of West Nile cases, according to the CDC. Despite our own swarms of mosquitoes in Alaska, we have been spared West Nile virus to date.

As this illness is new to many of us throughout Indian Country, let us review what is known about West Nile virus in women. First, there is minimal information on the effects of West Nile (WN) virus during pregnancy. Hence, the CDC has established a registry to track these pregnancies (call (970) 221-6400 to enroll patients).

The CDC also made the following recommendations:

- Pregnant women should take precautions to protect themselves from bites from potentially infected mosquitoes (e.g., avoid being outdoors at dawn and dusk, wear protective clothing, use insect repellents containing DEET).
- Pregnant women with meningitis, encephalitis, acute flaccid paralysis, or unexplained fever in an area of ongoing WN virus transmission should have serum tested for antibody to WN virus. If laboratory tests indicate recent infection with WN virus, the infection

should be reported to the local or state health department, and the woman should be followed to determine the outcome of her pregnancy.

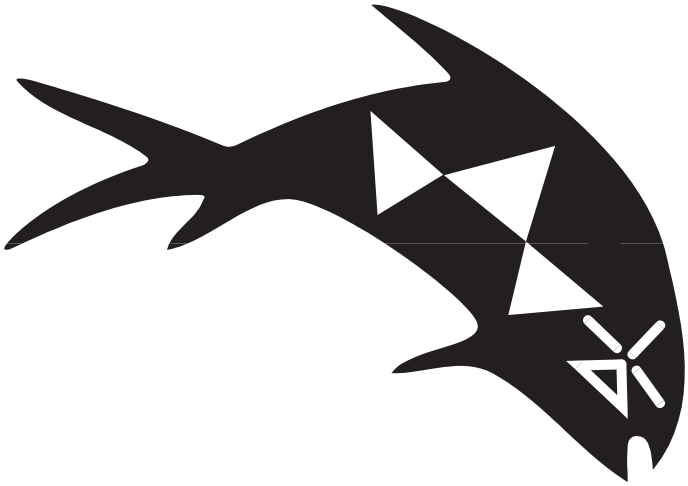
- If WN virus infection is diagnosed in pregnancy, care is supportive. An ultrasound examination of the fetus to screen for abnormalities should be considered no sooner than two to four weeks after onset of symptoms. A causal relationship between WN virus and fetal abnormalities has not been proven. There is a single report of a woman who had WN virus encephalitis during the 27th week of her pregnancy and subsequently delivered a term infant with chorioretinitis, cystic destruction of cerebral tissue, and laboratory evidence of congenitally acquired WN virus infection.
- Amniotic fluid, chorionic villi, or fetal serum can be tested for evidence of WN virus infection. However, the sensitivity, specificity, and predictive value of these tests to evaluate fetal WN virus infection are not known, and the clinical consequences of fetal infection have not been determined. In cases of spontaneous or induced abortion, testing of all products of conception for evidence of WN virus infection is advised to document the effects of WN virus infection on pregnancy outcome.
- Screening asymptomatic women for WN virus infection is not recommended because there is no treatment and the consequences of infection during pregnancy have not been well-defined.
- Clinical evaluation is recommended for infants born to mothers known or suspected to have WN virus infection during pregnancy. Further evaluation should be considered if any clinical abnormality is identified or if laboratory testing indicates that an infant might have congenital WN virus infection.

Cord Blood Donation: Infectious Disease

West Nile virus in pregnancy has wider implications and points up other pregnancy related issues, e.g., infectious disease and cord blood banking. Potential donors, and their husbands, should be queried for risk factors for infectious diseases, inherited immunologic and hematologic diseases, cancer, and other conditions that could be transmissible by blood. Maternal blood testing is performed to screen for West Nile virus in addition to hepatitis B, hepatitis C, HIV-1 and -2, HIV p24, CMV, syphilis, and in some programs human T-lymphotropic virus (HTLV)-I/II. Finally, upon delivery of the infant, the mother's hospital chart is reviewed for labor and delivery factors that could put the infant donor, and thus the collected stem cell product, at risk for infection.

What's New on the MCH Web Page?

Any new solutions to nausea and vomiting in pregnancy? See the new Perinatology Corner Module: Nausea and Vomiting in Pregnancy.



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

"*We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time.*"

T. S. Elliot

Articles of Interest

Clinical practice. Overweight children and adolescents. *N Engl J Med*. 2005 May 19;352(20):2100-9.*www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15901863&query_hl=3*

- The best assessment of overweight is the body mass index (BMI).
- Children 2 to 6 years of age with a BMI > 95% should aim for weight maintenance.
- Children > 6 years of age should aim for weight loss.
- Data from randomized trials is lacking to support any particular strategy over others for weight loss or control in children or adolescents.
- The author recommends behavior modification focusing on reduction of soft drink intake, decrease in television and computer screen time, and increase in active play.

Effect of orlistat on weight and body composition in obese adolescents: a randomized controlled trial. *JAMA*. 2005 Jun 15;293(23):2873-83. *www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15956632&query_hl=6*

- Orlistat is an intestinal lipase inhibitor that decreases intestinal fat absorption by up to 30%.
- Patients were randomized to receive orlistat 120 mg TID or placebo for one year. All patients received behavioral therapy, exercise counseling, and instructions for a hypocaloric diet.
- Overall there was a decrease in BMI of 0.55 in the orlistat group compared to an increase of BMI of 0.31 in the placebo group. 13% of the orlistat group lost over 15 pounds compared to 4% of the placebo group.
- Up to 20% of patients taking orlistat had GI side effects such as oily stools and flatulence but the overall safety was good.

Editorial Comment

Overweight and obesity is a significant problem in Native American youth. It is known that overweight adolescents have a 15-fold greater risk of being overweight adults. It is also known that treatment of obesity in all age groups, but especially adolescents, is notoriously difficult. The pediatric problems of today will be the major adult medical problems of diabetes, hypertension, and cardiac disease in just a few years.

The first paper by Dietz and Robinson is a good overview of the problem with an extensive list of possible strategies for weight reduction and a complete list of references.

The second paper recounts a successful weight loss intervention in adolescents using the lipase inhibitor orlistat and behavior modification. Overall there was modest weight loss at one year of about five pounds in the intervention group while there was weight gain in the placebo group of about three pounds. However, a subgroup of 13% in the orlistat group did lose and maintain a weight loss of over 15 pounds at one year. There is a significant cost for orlistat of about $2000 per year. Can we afford it? Can we afford not to pay for it if the long term health cost of diabetes and heart disease may be even higher?

Recent literature on American Indian/Alaskan Native Health

Lower respiratory tract infections among American Indian and Alaska Native children and the general population of US children. *Pediatr Infect Dis J*. 2005 Apr;24(4):342-51. *www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15818295&query_hl=1*

- Lower respiratory tract infections (LRTI) are a major cause of morbidity and mortality in American Indian/Alaska Native (AI/AN) children.
- Rates of hospitalization for AI/AN infants and children are two times higher than the US population as a whole.
- Rates for outpatient visits for AI/AN infants and children are three times higher than the US as a whole.
- Disease rates are particularly high for AI/AN children in the southwest and Alaska.

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