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Native American Dermatology: a Preliminary Report on The Prevalence of Cutaneous Disorders at the Phoenix Indian Medical Center Dermatology Clinic

Eugene T. Conte, DO, FAOCD, Advanced Dermatology of Ohio, Centerville, Ohio, Assistant Clinical Professor, Ohio University College of Osteopathic Medicine, Department of Dermatology, Athens, Ohio, and Consultant, Phoenix Indian Medical Center, Phoenix, Arizona; Keoni Nguyen, DO, Dermatology Resident, Ohio University, College of Osteopathic Medicine, Department of Dermatology, Athens, Ohio, and Intern, Michigan State University, Kalamazoo Center for Medical Studies, Department of Medicine, Kalamazoo, Michigan; CAPT Eric Ossowski, Chief of Department of Family Practice, Phoenix Indian Medical Center, Indian Health Service, Phoenix, Arizona; and Ruvie Martinez, MS, Statistician, Michigan State University, Kalamazoo Center for Medical Studies, Department of Statistics, Kalamazoo, Michigan

Introduction

The Merriam-Webster dictionary defines "Native American" as a member of any of the aboriginal peoples of the western hemisphere, especially a Native American of North America and especially the United States.[1] However, the term Native American has also been used in the molecular literature to describe the genetic migration of the Amerindians from northeastern Siberia to South America dating back 20,000 to 25,000 years ago.[2-5] Moreover, to add to the confusion about the definition of Native American, Cornelison,[6] Lane,[7] Everett,[8] Birt,[9] and Fusaro[10] utilized the term Native American, Amerindian, and American Indian interchangeably to delineate actinic prurigo, also known as hereditary polymorphous light eruption or solar prurigo, as one of the most common dermatologic disorders associated with Native Americans of North America. Thus, because of inconsistent usage of the term Native American in the previous literature, in this paper, we are referring to our study population as Native Americans of North America.

The epidemiology of skin diseases in the Native American population has not been formally studied or monitored. Brandt[11] published the first observational paper on Native American dermatologic disorders on the Navajo reservation in

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1958. He was under the supervision of Leon Goldman, director of the Department of Dermatology and Syphilology at the University of Cincinnati. Brandt's observations provided insight into some common skin diseases of one Native American tribe, specifically the Navajo Indians. He accumulated about one hundred and fifty dermatologic cases in which the ten most frequent diagnoses included acne, vitiligo, scrofuloderma, atopic dermatitis, erythema nodosum, rhinophyma, molluscum contagiosum, stasis dermatosis, seborrheic dermatitis, and impetigo, in no specific order. Brandt also noted that psoriasis seemed to be rare on the Navajo Reservation, for there were only three reported cases by other physicians, and none by him. Additionally, Cornelison[6] reported that psoriasis was also rare in pure Native Americans, for which he quoted Kerdel-Vegas.[12] In reviewing Kerdel-Vegas' manuscript, his explanation of why the Amerindians were free from psoriasis was because this population lacked the antigen W17, which was constantly found to be associated with psoriasis. He noted that antigen W17 had never been found in the Amerindians in the various studies among Yanoamas, Makiritares, and Waraos tribes found in Venezuela. Farber[13] corroborated Kerdel-Vegas' findings, for he found psoriasis to be most common in whites of northern European origin, less frequent among people of Asian and Black ethnicity, and very rare among southern Native Americans.

The literature about Native American cutaneous disorders is sparse. The true prevalence of skin diseases in the Native American population can only be determined by large population surveys, which have not been done. Furthermore, there has been no study comparing the prevalence of cutaneous disorders and Native American percent tribal heritage (NAPTH) in North America.

Objective

The purpose of our study is to gather information about cutaneous disorders that are seen with the highest frequency in the Native American population in the Phoenix Indian Medical Center (PIMC) service population. Once this information has been obtained, we would like to create a teaching model for dermatologists and primary care physicians who work in the Indian health system and/or who are treating Native Americans on a daily basis.

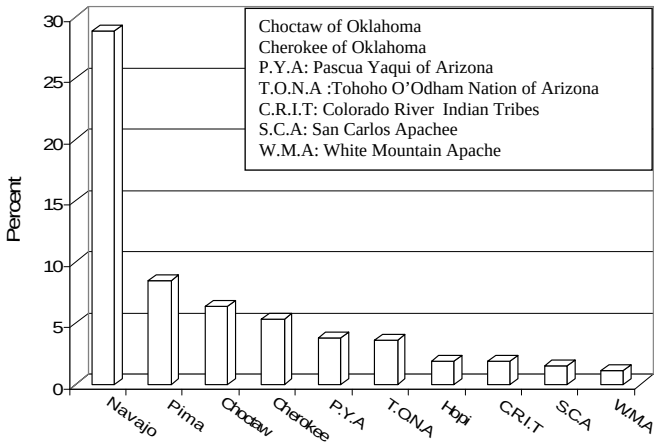
Methods

From June 2004 to December 2006, data were collected from five hundred and eighty five (585) patients at the PIMC dermatology clinic. A board certified dermatologist supervised the clinic. The dermatologist verified all patients' NAPTH through medical records. Data reflecting the primary medical and surgical dermatologic diagnoses, age, gender, and percent tribal heritage were collected on the first office visit. Surgical diagnoses were sent to dermatopathology for confirmation. A statistician analyzed the data by Chi square analysis for association of percent tribal heritage with dermatologic disorders, gender with dermatologic disorders, and age group with dermatologic disorders. A p value less than 0.05 was considered statistically significant. This observational study did not change the standard of care for the patients during their office visit. One limitation of this study was the fact that only patients treated at the Indian Health Service dermatologic clinic in Phoenix, Arizona were included.

Results

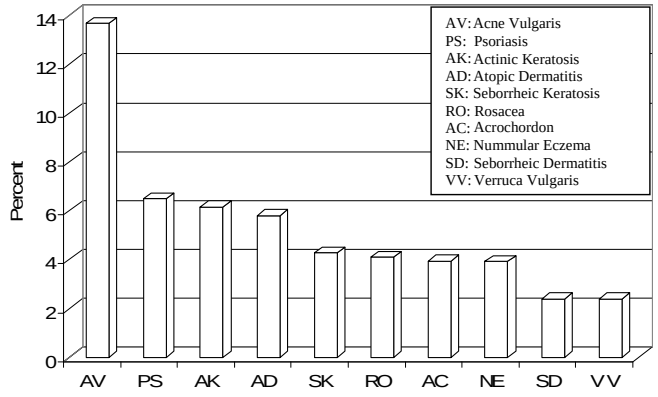
The mean age of the five hundred and eighty five (585) patients is 39 years. The gender ratio of females (398) to males (189) is approximately 2:1. The ten Native American tribes represented with the greatest frequency are Navajo, Pima, Choctaw of Oklahoma, Cherokee of Oklahoma, Pascua Yaqui of Arizona, Tohoho O'odham Nation of Arizona, Hopi, Colorado River Indian Tribes, San Carlos Apache, and White Mountain Apache (see Figure 1). The top ten Native American

Figure 1. Top ten pure Native American tribes, n=585.



cutaneous disorders in descending order are acne vulgaris, psoriasis, actinic keratosis, atopic dermatitis, rosacea, acrochordons, seborrheic keratosis, nummular eczema, seborrheic dermatitis, and verruca vulgaris (see Figure 2).

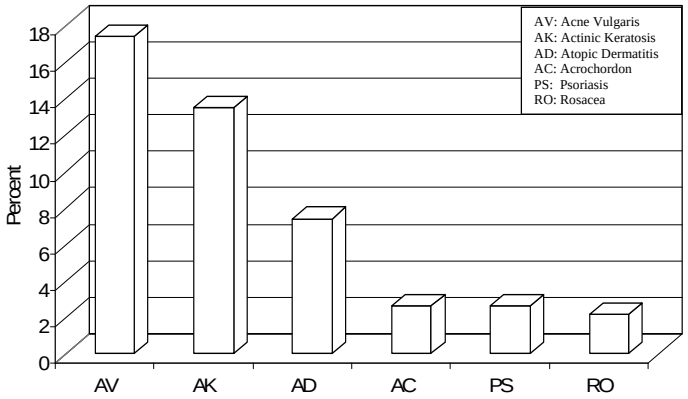
Figure 2. Top ten Native American cutaneous disorders, n=585.



Two hundred and twenty eight (228) of 585 (39%) patients presented with NAPTH of less than or equal to fifty percent (≤

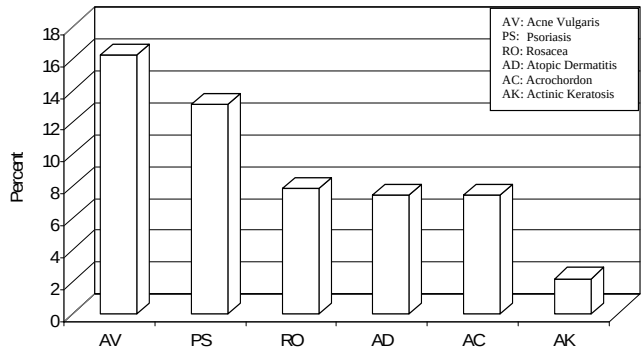
50%). The mean age in this group is thirty-seven (37) years old. The gender ratio of females (157) to males (71) is approximately 2:1. The top six cutaneous disorders are acne vulgaris (17.47%), actinic keratosis (13.54%), atopic dermatitis (7.42%), acrochordons (2.62%), psoriasis (2.62%), and rosacea (2.18%) (Figure 3). A Chi square test of association between the top six cutaneous disorders and NAPTH is significant (p<0.0001).

Figure 3. NAPTH ≤ 50% Top Six Cutaneous Disorders, n=228. NAPTH and cutaneous disorders are correlated with each other (p < 0.00001, Chi-square test).



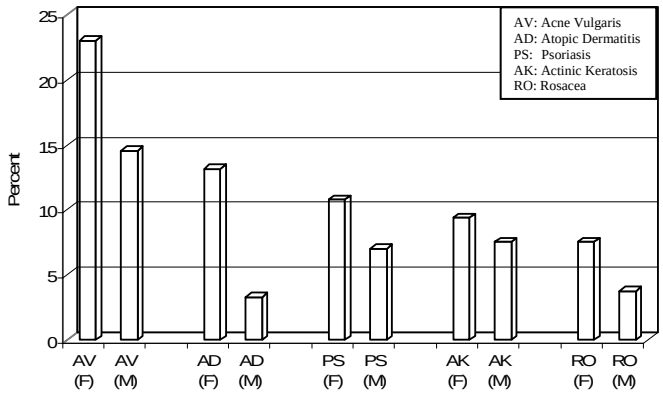
Three hundred and thirty three (333) of 585 (57%) patients presented with NAPTH of one hundred percent (100%). This group included patients who were of mono-tribal and multi-tribal heritage. That is, mono-tribal heritage might be, for example, 100% Navajo, while multi-tribal heritage might be 50% Navajo and 50% Choctaw, which totals 100% NAPTH. The mean age in this group is forty-one (41) years old. The gender ratio of females (224) to males (109) is approximately 2:1. The top six dermatologic disorders are acne vulgaris (16.16%), psoriasis (13.10%), rosacea (7.86%), atopic dermatitis (7.42%), acrochordons (7.42%), and actinic keratosis (2.18%) (see Figure 4). A Chi square test of association between the top six cutaneous disorders and NAPTH is significant (p<0.0001).

Figure 4. NAPTH 100% Top Six Cutaneous Disorders, n=333. NAPTH and cutaneous disorders are correlates with each other (p < 0.00001, Chi-square test).



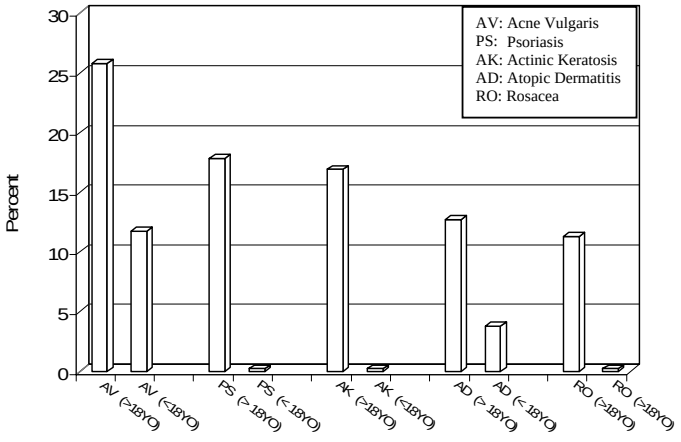
In analyzing gender and cutaneous disorders, the Chi square test of association utilized two hundred and thirteen (213) of 585 (36%) to categorize the top five cutaneous disorders. The top five female cutaneous disorders are acne vulgaris (23%), atopic dermatitis (13.15%), psoriasis (10.80%), actinic keratosis (9.39%), and rosacea (7.51%). The top five male cutaneous disorders are acne vulgaris (14.55%), actinic keratosis (7.51%), psoriasis (7.04%), rosacea (3.76%), and atopic dermatitis (3.29%) (see Figure 5). The Chi square test of association between gender and cutaneous disorders suggests that these are independent of each other (p = 0.2374).

Figure 5. Gender and Cutaneous Disorders: Top five cutaneous disorders, n=213. Gender and cutaneous disorders are indepenent of each other (p < 0.2374, Chi-square test).



The age group and cutaneous disorders data revealed two hundred and thirteen (213) (36%) patients who were analyzed with the Chi square test of comparison. The top five cutaneous disorders of patients greater than eighteen years old are acne vulgaris (25.82%), psoriasis (17.82%), actinic keratosis (16.90%), atopic dermatitis (12.68%), and rosacea (11.27%) (see Figure 6). As for patients who are less than eighteen years

Figure 6. Age and Cutaneous Disorders, n=213. Age group and cutaneous disorders are correlated with each other (p < 0.0001, Chi-square test).



old, there are only two cutaneous disorders observed, which are acne vulgaris (11.74%) and atopic dermatitis (3.76%). The Chi square test of association between age group and cutaneous disorders suggests statistical significance ($p < 0.0001$).

Conclusion

This observational study is the first to formally assess the correlation between NAPTH and cutaneous disorders. Although the scientific literatures state that psoriasis is rare in pure Native Americans, we found this assertion to conflict with our data, for psoriasis is not rare in Native Americans. The prevalence of psoriasis is higher for those with 100% NAPTH as compared to those with ≤ 50% NAPTH. However, actinic keratosis is more prevalent in the ≤ 50% NAPTH, possibly due to gene dilution. Many authors have also reported that polymorphous light eruption is common in Native Americans;[6-10] however, we did not find this to be true in our population, for we only had one case. Although gender and cutaneous disorders were not statistically significant, it did show that females presented with higher percentage in the top five cutaneous disorders.

The study of age group and cutaneous disorders revealed that more Native American seek treatment for their acne over the age of eighteen. Furthermore, atopic dermatitis was noted to present more commonly over the age of eighteen as opposed to in childhood. In comparing our Native American office-based populations with the National Ambulatory Medical Care Survey (NAMCS) office-based population of 2002,[15] (Table 1)

Table 1. Comparison of the top ten most frequent cutaneous disorders between NAMCS of 2002 to NAPTH ≤ 50% AND NAPTH 100%.

	NAMCS 2002 Dermatology Office-Based	≤ 50% NAPTH Dermatology Office-Based	100% NAPTH Dermatology Office-Based
1	Acne Vulgaris	Acne Vulgaris	Acne Vulgaris
2	Actinic Keratosis	Actinic Keratosis	Psoriasis
3	Benign Skin Tumor	Atopic Dermatitis	Rosacea
4	Nonmelanoma Skin Cancer	Seborrheic Keratosis	Atopic Dermatitis
5	Seborrheic Keratosis	Basal Cell Carcinoma	Acrochordon
6	Verruca Vulgaris	Urticaria	Nummular Eczema
7	Dermatitis NOS	Seborrheic Dermatitis	Seborrheic Keratosis
8	Psoriasis	Psoriasis	Lichen Simplex Chronicus
9	Epidermoid Cyst	Verruca Vulgaris	Melasma
10	Rosacea	Rosacea	Seborrheic Dermatitis

it was noted that acne vulgaris remained the number one dermatologic diagnosis in all three office-based practices. Additionally, the top ten cutaneous disorders of NAMCS and the population with ≤ 50% NAPTH were very similar. This parallelism of cutaneous disorders may possibly be due to gene dilution. Lastly, the comparison between the 100% NAPTH with the NAMCS showed less commonality than the ≤ 50% NAPTH, for psoriasis and rosacea were more prevalent in the 100% NAPTH.

The literature about Native American cutaneous disorders is limited. There need to be more formal studies to fully understand Native American dermatologic disorders. We feel that knowledge of the most prevalent cutaneous disorders and their NAPTH will not only serve to improve diagnosis of these disorders, but will also stimulate future research in this area.

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Mercury Amalgam Waste

William P. Fournier, MPH, LTJG, USPHS, Environmental Health Officer, Nashville, Tennessee, currently Investigator, Milwaukee Resident Post, US Food and Drug Administration, Wauwatosa, Wisconsin; Kit Grosch, MPH, REHS, CDR, USPHS, Institutional Environmental Health Officer, Indian Health Service Nashville Area Office, Nashville, Tennessee; and M. Catherine Hollister, RDH, MSPH, PhD, CDR, USPHS, Director, Dental Support Center, Nashville Area, United South and Eastern Tribes, Inc., Nashville, Tennessee

Introduction

Dentists and their staff use certain toxic substances that may lead to the contamination of water systems and the environment. In order to prevent contamination, dental offices should implement proper waste management procedures. As a consequence, the Indian Health Service (IHS) has developed waste management guidelines for the use of mercury amalgam.

Dental amalgam can contain up to 50 percent mercury. Although mercury in amalgam form is very stable, it should not be disposed of or rinsed down the drain. This is important because the amalgam waste could end up in municipal garbage, medical waste, or in the sewer system. If the waste is incinerated the mercury could be released to the environment, and if it reaches the sewer system it could contaminate drinking water or accumulate in fish. The best method of dealing with amalgam waste is by recycling it. Mercury can be recovered through a distillation process and reused in other products.

The following document summarizes the different types of mercury amalgam wastes, management practices for dealing with amalgam waste that conform to IHS guidelines, and some Do's and Don'ts when dealing with amalgam waste as outlined by the American Dental Association (ADA).

Types of Amalgam Wastes

- Non-contact amalgam (scrap): excess mixture leftover after a dental procedure.
- Contact amalgam: amalgam that has been in contact with the patient. Examples include extracted teeth with amalgam restorations, carving scrap collected at the chair, and amalgam captured by the chair side traps, filters, or screens.
- Chair side traps: amalgam that is captured during amalgam placement or removal procedures.
- Vacuum pump filters: filters and traps contain amalgam sludge or water. Some recyclers will accept whole filters, while others may require special handling requirements for this material.
- Amalgam sludge: this is a mixture of liquid and solid material collected within the vacuum pump filters.
- Empty amalgam capsules: amalgam may be left over in the capsules after mixing the precapsulated dental amalgam.

Amalgam Waste Management Practices

Scrap Amalgam Handling
Dental scrap amalgam should be collected and stored in two designated, air-tight, wide-mouthed plastic containers. One should be labeled CONTACT AMALGAM (amalgam that has been in contact with the patient's mouth), and the other should be labeled NONCONTACT AMALGAM. NOTE: some recyclers may require special handling requirements for extracted teeth such as shipping the tooth in a disinfectant. Make sure that the container lid is tightly sealed.
Amalgam Capsule Handling
Stock capsules in a variety of different sizes. After mixing the amalgam, place the empty capsules in a wide-mouthed, airtight container that is labeled AMALGAM CAPSULE WASTE. Capsules that cannot be emptied should also be placed in containers labeled AMALGAM CAPSULE WASTE. Make sure that the container lid is tightly sealed.
Disposable chair-side traps
Open the chair-side unit to expose the trap. Remove the trap and empty its contents into a wide-mouthed, airtight container that is marked CONTACT AMALGAM. Make sure that the container lid is tightly sealed. Chair-side traps that are only used for hygiene can be thrown in the regular garbage. Different states have different requirements for the disposal of infectious waste that is in the traps with the amalgam such as blood or saliva. Check with your local recycler or contact the Area Office of Environmental Health for the proper procedures.
Reusable Chair-side Traps
Open the chair-side unit to expose the trap. Remove the trap and empty its contents into a wide-mouthed, airtight container that is marked CONTACT AMALGAM. Make sure that the container lid is tightly sealed. **DO NOT** rinse the trap under running water. Replace the trap into the chair-side compartment. Different states have different requirements for the disposal of infectious waste that is in the traps with the amalgam such as blood or saliva. Check with your local recycler or contact the Area Office of Environmental Health for the proper procedures.
Vacuum Pump Filters
Change the filter to the manufacturers suggested schedule. Remove the filter. Hold the filter over a tray or another container that can catch any spills. Next pour out as much liquid as possible without losing any noticeable amalgam. The amalgam-free liquid can then be rinsed down the drain. Place the lid on the filter and put it in the box in which it was originally shipped. Once the box is full, the filters can be recycled.
Line Cleaners
Use only non-bleach, non-chlorine containing solutions when flushing the wastewater lines and vacuum systems. A list of ADA approved cleaners is posted at the end of this document.

American Dental Association (ADA) Do's and Don'ts for Dealing with Amalgam Waste

DO	DON'T
Do use precapsulated alloys and stock a variety of capsule sizes	**Don't** use bulk mercury
Do recycle used disposable amalgam capsules	**Don't** put used disposable amalgam capsules in biohazard containers, infectious waste containers (red bags) or regular garbage
Do salvage, store, and recycle noncontact amalgam (scrap amalgam)	**Don't** put non-contact amalgam waste in biohazard containers, infectious waste containers (red bags), or regular garbage
Do salvage contact amalgam pieces from restorations after removal and recycle the amalgam waste	**Don't** put contact amalgam waste in biohazard containers, infectious waste containers (red bags), or regular garbage
Do use side-chair traps to retain amalgam and recycle the contents	**Don't** rinse chair-side traps containing amalgam over drains or sinks
Do recycle contents retained by the vacuum pump filter or other amalgam collection devices, if they contain amalgam	**Don't** rinse vacuum pump filters containing amalgam or other amalgam collection devices over drains or sinks
Do recycle teeth that contain amalgam restorations. (*Note*: Ask your recycler whether or not extracted teeth with amalgam restorations require disinfection)	**Don't** dispose of extracted teeth that contain amalgam restorations in biohazard containers, infectious waste containers (red bags), sharps containers, or regular garbage
Do manage amalgam waste through recycling as much as possible	**Don't** flush amalgam waste down the drain or toilet
Do use line cleaners that minimize the dissolution of amalgam	**Don't** use bleach or chlorine-containing cleaners to flush waste water lines

Recycling

As mentioned earlier, the recommended method for amalgam disposal is by recycling the waste through an Environmental Protection Agency (EPA) approved vendor. The following actions should be taken to properly recycle your amalgam waste.[1,3]

- Carry the amalgam capsules in a variety of different sizes to reduce the amount of waste produced.
- Personal protective equipment such as gloves, masks, and protective eyewear should be worn when handling amalgam waste.
- Some vendors have special requirements for the handling, storing, and transportation of amalgam waste, so be aware of any special conditions. Dental clinics that need to find a recycler should contact their county or local waste authority to inquire about an amalgam waste recycling program.
- Amalgam waste should be stored in covered plastic containers that are clearly labeled.
- Always store different types of amalgam waste (e.g., contact and noncontact) in separate containers.
- Do not store amalgam waste under liquid. This would require the liquid to be treated as hazardous waste. Storage in tight-fitting covered containers and routine recycling should minimize any occupational exposures.

Recycling Companies

Inclusion of a service in this list does not constitute approval or endorsement of that company by the IHS or provide any assurances with regard to the quality of services provided. All vendors should be asked to provide certification that your mercury waste is actually being recycled.

- Dental Recycling of North America (Dentalcare Waste Management) 1-800-360-1001
- Stericycle Dental Amalgam Mailback program 1-800-355-8773
- Bethlehem Apparatus Dental Amalgam Recycling Program 1-610-838-7034
- Advanced Environmental Recycling Corporation (AERC) 1-610-797-7608
- Amalgaway Mail Disposal Service 1-800-267-1467

Amalgam waste should be stored and managed in accordance with the instructions of the recycler. The vendors can provide shipping instructions. Most provide shipping containers that are already appropriately labeled.

Additional Information

American Dental Association. For more information on mercury use, disposal, and safety, see the ADA website at *http://www.ada.org/prof/resources/topics/amalgam.asp*

Indian Health Service. See the Oral Health Program Guide for information regarding mercury use and safety.

Environmental Protection Agency. Check state legislation and regulations at the following site to assure you are acting in accordance with requirements of your state: *http://www.epa.gov/epaoswer/hazwaste/mercury/laws.htm*

ADA Approved Line Cleaners

The following line cleaners do not contain bleach or chlorine. This will reduce the dissolution of amalgam. Check with your manufacturer to determine which line cleaner would be appropriate for use with your equipment: Biocide (Biotrol International), BirexSe (Biotrol International), DRNA Vac (Dental Recycling North American Inc.), E-Vac (L&R Manufacturing Co.), Fresh-Vac (Huntington), GC Spray-Cide (GC America Inc.), Green and Clean (Metasys), Microstat 2 (Septodont USA), Patterson Brand Concentrated Ultrasonic Cleaner/Disinfectant Solution (Patterson Dental Supply, Inc.), ProE-Vac (Cottrell Ltd.), Pure-Vac (Sultan Chemists Inc.), Sani-Treet Plus (Enzyme Industries Inc.), SRG Evacuation (Icon Labs), Stay Clean (Apollo Dental Products), Turbo-Vac (Pinnacle Products), Vacusol Ultra (Biotrol International), Cavicide (Metrex Research Corp.), Vacuum Clean (Palmero Health Care).

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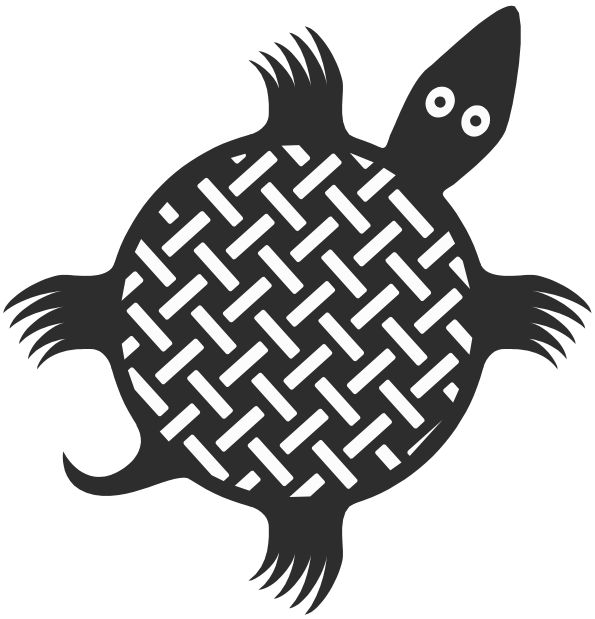

Benefits of Utilizing a Certified Foot Care Nurse in a Podiatric Practice

Dr. Christine White, DPM; and CAPT Candice Cotton RN, MSN, CFCN, CWON, Gallup Indian Medical Center, Gallup, New Mexico

Diabetes mellitus is on the rise in the United States, and we need to emphasize a multi-disciplinary approach to treatment in order to handle the large influx of cases we will be seeing in our practices. According to the ADA, in 2005 there were a total of 20.8 million people in the US with diabetes, up from 17 million in 2001.[1] Diabetic neuropathy is the leading cause of amputations, accounting for 50 - 70% of all non-traumatic amputations in the US.[2] Admissions for foot complications account for 20 - 25% of all hospital days for patients with diabetes.[3]

One way of assuring that we are providing our clientele with a higher standard of care is to incorporate in our practices a nurse that has his/her wound and foot care certification. Since January 2005, the Wound, Ostomy and Continence Nursing Certification Board has offered the credentials of Certified Foot Care Nurse (CFCN) to registered nurses who have completed a formal foot and nail program, as well as completion of a clinical pathway supervised by an expert. By following strict guidelines, the Board is assuring that the standard of care of podiatric patients will not be compromised.

In this way, practices that have a high volume and high risk diabetic patients can safely see a large number of patients and still maintain or improve amputation rates for and care of the patients. With the increasing prevalence of diabetes in our society, it is prudent to structure our clinics to efficiently see the high volume of patients with diabetic peripheral neuropathy and associated ulcers that will flood our practices. In our practice, utilization of a multi-discipline approach to diabetic foot care has yielded approximately a 45% decrease in amputation rates over the past three years.

The following are the major aspects that prove a Certified Foot Care Nurse is most beneficial when utilized as a member of any podiatric practice:

Semms Weinstein Monofilament Examinations

Monofilament examinations can be performed on every patient with diabetes/impaired glucose metabolism each year, which is the Indian Health Services goal/guideline. Any patients with compromised peripheral neurological function can be tested at a closer interval of 3 - 6 months. In this way, we can detect neuropathic changes and institute corrective therapy earlier, such as tight glycemic control, oral medications, or possibly nerve blocks for pain management.

Wound Care

Utilizing the services of a Certified Wound Care Nurse (CWCN) definitely has advantages when it comes to a busy practice that sees a high volume of wounds. The nurse can perform the weekly wound care, from measuring the wounds to the application of the dressing, to dispensing the supplies to the patient. The nurse can perform debridement of ulcers, including the use of mechanical, autolytic, enzymatic, and biologic methods. For frequent dressing changes, the nurse can be the primary provider at those visits, providing there are no complications. The podiatrist is available for any unforeseen changes in wound status.

Palliative Care

The Certified Foot and Nail Care Nurse can provide primary palliative treatment of uncomplicated nails and calluses. This frees up the podiatrist to perform in-office procedures and also helps to forestall the development of complications.

Vascular Studies

The nurse can be trained to perform non-invasive vascular studies, including the ankle brachial index, toe brachial recordings, and pulse volume recording on all patients with diabetes. This can result in early detection of vascular compromise, and earlier intervention. The patient would be referred to a vascular specialist for applicable interventions such as angioplasty, stent placement, or bypass to re-establish vascular flow. Early intervention will be a huge step in the prevention of amputations.

Triage

Our nurse manages walk-in triage. By assessing neurological, vascular, and infection status, patients are fast-tracked to earlier treatment and wound prevention.

Education

Education has always been the best method of wound prevention and better foot care. The more information patients are given, the more likely they are to follow guidelines. Our nurse can educate the patient on topics from wound care to plantar fasciitis.

In conclusion, the utilization of a multi-discipline approach to diabetic foot care can decrease the likelihood of amputations and improve patient care. The utilization of a nurse certified foot and wound care in the podiatry setting can

- Relieve the busy practitioner from palliative care issues
- Decrease clinic waiting time
- Increase patient satisfaction due to more frequent care and less waiting
- Increase revenue by billing for a nurse grade facility fee instead of for a podiatry technician.

Having a Certified Foot Care Nurse who is credentialed through a nationally recognized credentialing board such as Wound Ostomy Continence Nursing Certification Board (WOCNCB) in the clinic raises the standard of care for our patients. The cost of diabetes care in the US in 2002 was $132 billion for both direct medical and indirect costs.[4] Given the current statistics on diabetes and associated risks in the US, we need to focus on early detection and early intervention in order to decrease the diabetic sequelae.

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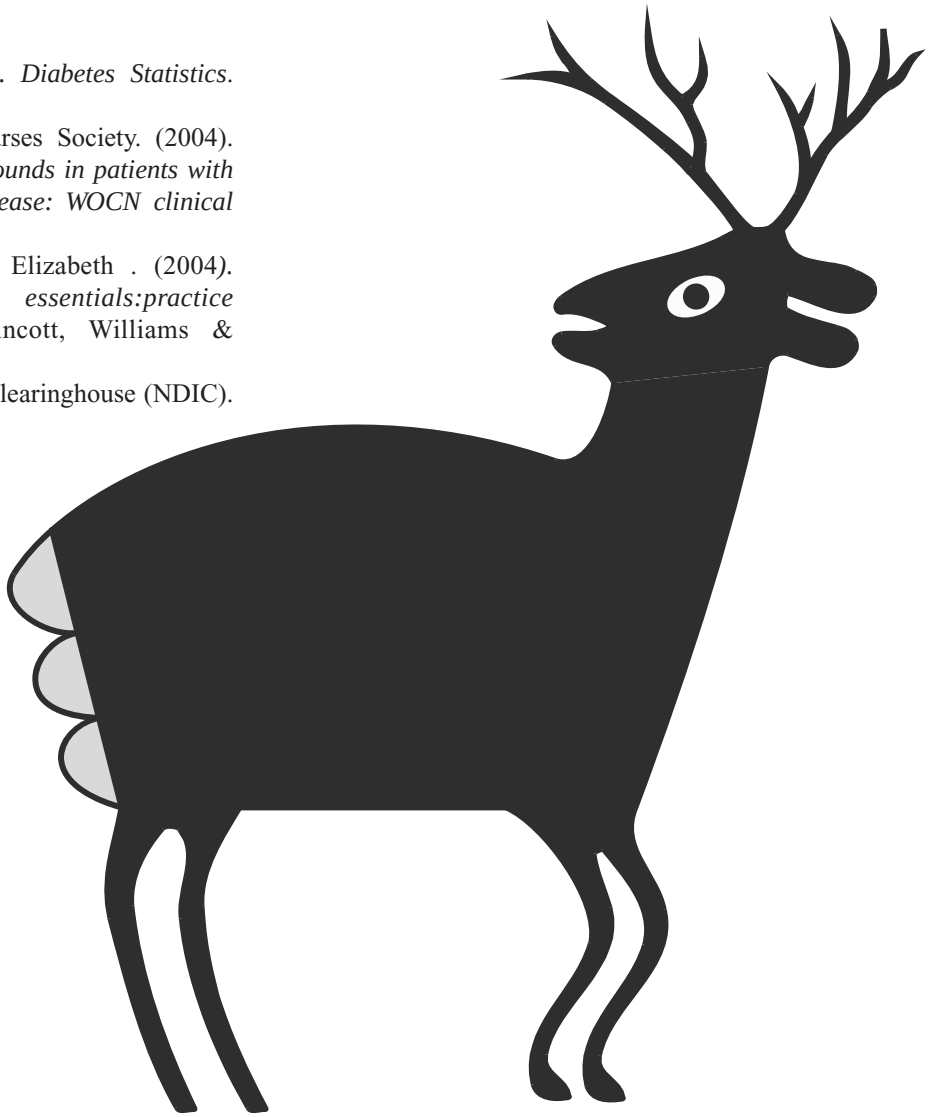


New NIH Continuing Education Program on SIDS Risk Reduction

The National Institutes of Health is releasing a continuing education program for nursing professionals designed to help reduce the risk of SIDS. This program, titled *Continuing Education Program on SIDS Risk Reduction*, helps nurses communicate the risk factors for SIDS to parents and child caregivers. The most current research about SIDS can be found in this program, in addition to practical approaches to communication about SIDS in a multi-cultural environment.

Nursing professionals who complete the program will earn 1.1 contact hours. *Continuing Education Program on SIDS Risk Reduction: Curriculum for Nurses* is a learner-directed program available from the National Institute of Child Health and Human Development (NICHD) of the National Institutes of Health (NIH).

Although SIDS deaths have declined by 50 percent in recent years, it is still the leading cause of death in infants between one month and one year of age. In addition, the rate of SIDS in American Indian/Alaska Native populations is almost three times higher than the rate of SIDS in white populations**.** Research shows that nurses are in a unique position to educate parents and caregivers about SIDS and ways to reduce the risk of SIDS.

This newly-available CE is designed to inform nurses about the latest research and risk-reduction strategies for SIDS, and to provide nurses with concrete tools and strategies for communicating this information to parents and caregivers both in the clinical and community settings. Topics include the etiology, epidemiology, and risk factors for SIDS (including prenatal, developmental, and environmental risk factors). It also covers critical SIDS risk-reduction messages for parents and caregivers, challenges to SIDS risk reduction, the role for nurses in educating parents and caregivers about SIDS risk reduction, and specific approaches for communicating effectively about SIDS risk reduction with parents and caregivers.

Nursing professionals can order a free copy of the curriculum by visiting *http://www.nichd.nih.gov/sidsnursesce/* or by calling 1-800-370-2943. An interactive, online version of the program will be available toward the end of 2007.

Important facts about Sudden Infant Death Syndrome (SIDS)

- SIDS is the sudden, unexplained death of an infant younger than one year of age. It is a sudden and silent medical disorder that can happen to a seemingly healthy infant.
- More than 2,000 babies in the Unites States succumb to SIDS every year.
- Although the overall number of SIDS deaths have declined by 50 percent in recent years, SIDS is still the leading cause of death in infants from one month to one year of age.
- African American families are twice as likely to be affected by SIDS as are white families.
- The rate of SIDS in American Indian/Alaska Native populations is almost three times higher than the rate of SIDS in white populations.
- Research shows that side sleeping is not as safe as back sleeping; therefore the American Academy of Pediatrics began recommending that infants be placed *wholly on their backs* to sleep for naps and at night in 1996.
- The single most effective action that parents and caregivers can take to reduce the risk of SIDS is to place infants on their backs to sleep for naps and at night.
- Other major modifiable factors which may put infants at higher risk of SIDS are soft sleeping surfaces and loose, fluffy bedding; overheating during sleep; maternal smoking during pregnancy and smoke in the infant's environment; and bed sharing with an adult or with other children, regardless of age.
- Every sleep time counts—infants who are usually placed on their backs to sleep and who are then placed on their stomachs to sleep are at significantly higher risk of SIDS.
- Research shows that parents are more likely to follow safe sleep practices—such as placing infants on their backs to sleep—if staff at nurseries, hospitals, clinics, birthing centers, and other venues consistently model these behaviors. Nurses can be role models for parents and families simply by knowing the risk-reduction strategies and putting them into action.
- Because nurses often spend the most time with families in the hospital following the birth of a child, they are a key information resource for new parents. By knowing the risk-reduction strategies for SIDS and modeling them in the postpartum environment, nursing professionals are in a unique position to make a significant difference in alerting parents and families about reducing the risk of SIDS.
- Nurses can order hard copies or download electronic versions of the CE through NICHD's Web site, at http://www.nichd.nih.gov/sidsnuresce/, or by calling 1-800-370-2943. An interactive, online version of the program will be available toward the end of 2007.

Pharmaceutical Care for American Indian Elders

Joni Buffalohead, PhD, Administrator, Planner, Fond du Lac Human Services, Mashkiki waakaaigan (Medicine Lodge) Pharmacy, Minneapolis, Minnesota

Abstract

The literature about the health of American Indian populations contains much information about the incidence of chronic diseases such as diabetes and hypertension. Many programs have been established to address the epidemic numbers of patients with, for example, diabetes. However, one obvious pattern is the absence of medication management services. Researchers working with American Indian populations have made recommendations for the need to research the area of medication use for American Indian people of all ages.

The practice of pharmaceutical care served as the framework to identify the drug therapy problems and experiences among urban American Indian elders. This study, which is a descriptive, secondary data sample, is the first step to look at the drug therapy problems and their associated medical conditions.

This study involved a practice-based intervention called pharmaceutical care provided by a pharmacist to American Indian residents at an independent living facility located in a midwestern metropolitan area. The convenience sample selected was 36 American Indian elders with 337 encounters with a pharmaceutical care practitioner. The participants received documented pharmaceutical care using the Assurance™ software program. The process for secondary clinical data™ analysis looked at the number of drug therapy problems identified and the medical conditions associated with drug therapy for American Indian elders studied.

The purpose of the study was to identify American Indian elders' drug-related needs, and the types and causes of their drug therapy problems. Drug therapy problems are defined by Cipolle, Strand, and Morley (1998) "as any aspect of a patient's drug therapy that is interfering with a desired positive patient outcome."

Background

The definition of pharmaceutical care is as follows: a patient-centered practice in which the practitioner assumes responsibility for a patient's drug-related needs and is held accountable for this commitment (Cipolle, Strand, Morley, 1998). The pharmaceutical care practitioner assumes the responsibility to ensure that all of the patient's medication-related therapies are working in the most effective and safe manner. This enhances the patient's quality of care and quality of life. The pharmaceutical care practitioner serves as the patient's advocate by communicating with other health care providers and educating the patient. The pharmaceutical care practitioner and patient set goals for the patient to meet. If the pharmaceutical care practitioner identifies a drug therapy problem, he or she will make recommendations to the patient and to the appropriate health care provider (Cipolle et al., 1998).

This study was accomplished with volunteer open enrollment and was non-blinded. The services were provided without a control or comparison group. Patient records were selected from the Assurance Pharmaceutical Care ™ database.

Assurance Pharmaceutical Care™ is an electronic therapeutic record (ETR) system specifically designed to help provide and document pharmaceutical care. It collects patient demographics; checks for drug interaction; and does patient-specific care planning, medication documentation, drug therapy problem identification, follow-up evaluations, physician and patient reporting, billing, workload tracking, clinical outcome tracking, and data consolidation among numerous practitioners. Assurance Pharmaceutical Care™ supports practitioners providing pharmaceutical care to patients on a continuous basis, over repeated patient encounters, at multiple practice sites, by multiple practitioners.

A comprehensive electronic therapeutic record is generated and stored for each patient and includes complete patient demographic information, drug therapy problems identified, and an individualized care plan to manage the drug therapy of every medical condition. Best practices care plans for medical conditions are available using the most widely accepted system in use today (ICD-9-CM classification). Medical conditions are associated with the specific drug therapies, including product (coded with both NDC and GPI codes), dose, route, schedule, and duration. This medication management system allows the practitioner to document cost savings resulting from the identification, resolution, and prevention of drug therapy problems at the point of service. A unique classification system was developed for drug therapy problems, including adverse drug reactions and their most common causes. This system tracks what actions were taken to resolve drug therapy problems, who was involved in the resolution of the problem, and the economic impact in terms of health care costs and savings.

For this study, patient records were selected, retrospectively, from the Assurance Pharmaceutical Care database. A retrospective data analysis about the prevalence of drug therapy problems was conducted with a convenient sample of 36 American Indian elders 55 and older whom received pharmaceutical care for eighteen months. The patients had had at least two encounters with the pharmaceutical care practitioner.

The data include seven categories of drug-therapy problems.

The categories are needing additional pharmacotherapy, but not receiving it (drug indication); taking / receiving an ineffective drug; taking / receiving too little of the correct drug; taking/ receiving too much of the correct drug; experiencing an adverse drug reaction; not taking/receiving the drug prescribed; and taking/receiving a drug for which there are no valid medical indications identified.

This was accomplished by conducting a retrospective data analysis from patients who identified themselves as American Indian. The data came from original records that were created by the pharmaceutical care practitioner providing pharmaceutical care services to ambulatory patients in their normal course of practice. The data were electronically stripped of the patients' identifiers and consolidated into the Assurance Pharmaceutical Care Database system developed by the faculty at the College of Pharmacy at the University of Minnesota.

Each visit between the pharmacy practitioner and the patient is considered an encounter. The independent living facility housed 50 American Indian elders; 36 of the 50 enrolled elders chose to participate. The total number of encounters was 337. Patients were 16 (44%) females and 20 (55%) males between the ages of 60 and 90 years old (Figure 1).

The first of two encounters is the assessment, and the second is the follow-up. These encounters, along with the care plan, constitute the pharmaceutical care process. In the process, the practitioner conducts an assessment, which identifies the patient's medication-related needs and medication therapy problems, designs the care plan, and conducts the follow-up evaluation based on the individual patient's needs. This process enables the pharmaceutical care practitioner to ensure that their patient's medication therapies are working in the best, most effective, and safest way possible (Strand et al, 2004).

Analysis

The age group for the American Indian elders group is summarized in Figure 1. The ages range from 56 to 90 years. The largest age group was from 66-70 years representing 35%, and the smallest age group was between the ages of 86 and 90, representing approximately 2%.

Figure 1. Age distribution of patients

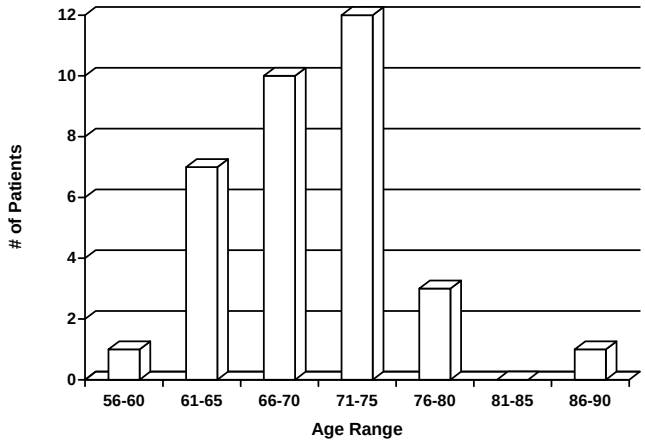
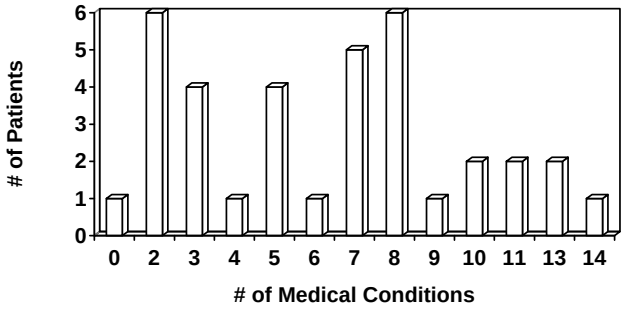


Table 1. Distribution of medical conditions

Medical condition	Number of Pts.
1. Hypertension	24
2. Family history cardiovascular disease	21
3. Nutritional deficiencies	16
4. Diabetes	14
5. Hyperlipidemia	14
6. General symptoms (pain-generalized)	14
7. Esophagitis	12
8. Osteoporosis	11
9	6
	6
11. Hypothyroidism	5
	5
13. Back pain	5
14. Obesity	4
15. Angina Pectoris	4
16. Stroke CVA	4
17. COPD/Emphysema	4
18. Gout	3
19. Anxiety	3
20. Depression	3

Listed in Table 1 are the 20 most common indications for drug therapy identified in this sample. These represent 78% of indications for drug therapy. The number of medical conditions per patient ranged from 0 to 14; the average number of medical conditions was six per patient (see Figure 2). Indications for drug therapy were to treat medical conditions ranging from hypertension to anxiety, while preventive therapies were indicated as primary prevention of osteoporosis or secondary prevention of a stroke or myocardial infarction. Out of the 36 Indian elders, 24 were being treated for hypertension, 16 had nutritional deficiencies requiring chronic medication use, and 14 had diabetes treated with a variety of oral agents and insulin products.

Figure 2. Number of medical conditions per patient



The most frequent medical conditions for drug therapy in the 337 encounters were hypertension (24 patients), diabetes (14 patients), and hyperlipidemia (14 patients) (see Table 2).

Table 2. Most frequent indications for drug therapy (N=228 indications)

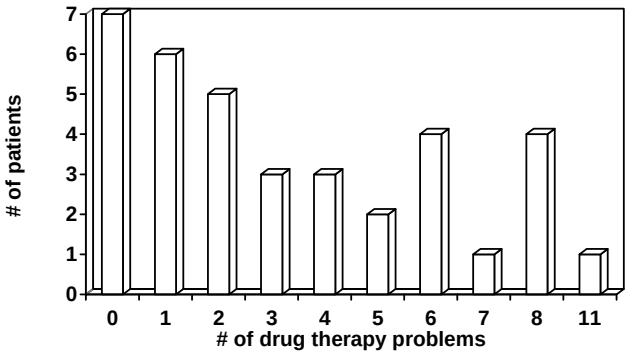
1. Hypertension	6. General symptoms (pain-generalized)
2. Family history cardiovascular disease	7. Esophagitis
3. Nutritional deficiency	8. Osteoporosis
4. Diabetes	9. Allergic Rhinitis
5. Hyperlipidemia	10. Other joint disorders (arthritis pain)
These 10 conditions represent 61% of all indications for drug therapy	

It is important to identify the most common indications for drug therapies and the average number of medical conditions per patient. This will show that an individual's medical condition can be complex and explain why a disease-specific approach may not be the best way to address his/her drug-related needs. It is also important to approach the whole patient rather than taking a disease-specific approach because the average number of medical conditions in this sample was high (six).

In general, these American Indian elders would be considered to have complex medical situations due to their multiple co-morbidities. The median number of medical indications for drug therapy was six. Seven of these individuals (19%) had 10 or more active medical conditions requiring an involved, comprehensive assessment to ensure that all of their medications were achieving the desired goals of therapy and not causing drug therapy problems.

Over the course of this study, patients took 357 medications, or an average of ten medications per patient. In addition to these prescription medications, 29 patients (81%) were also using 132 different over-the-counter medications to manage or prevent medical conditions. Additionally, four patients were using 13 different medications obtained as free physician samples in an attempt to manage their chronic conditions.

Figure 3. Number of drug therapy problems per patient



Drug therapy problems are defined as "any aspect of a patient's drug therapy that is interfering with a desired, positive patient therapeutic outcome (Cipolle, et al, 1998)." Within mainstream society, approximately half of all patients are found to have at least one drug therapy problem during the initial encounter (Cipolle, et al, 2004). The number of drug therapy problems identified, resolved, and prevented by the practitioner specific to this sample was 121 (see Figure 3). The average number of drug therapy problems identified for each patient was 3.4. Twelve patients (33%) had five or more drug therapy problems, while one had 11 drug therapy problems. The majority (80%) of drug therapy problems involved over-the-counter medications, including sample drugs provided by their physician (4%) and medications provided by friends and family members (1%).

Figure 4. Distribution of drug therapy problems

There are four categories in which the seven types of drug therapy problems occur (Figure 4): 1) indication; 2) effectiveness; 3) safety; and, 4) compliance (Strand, et al, 1998). The most commonly occurring category of drug therapy problem is "needs additional drug therapy," or indication. For example, a patient may not know that he or she has a medical condition requiring medication prior to the initial encounter. Another common category is "unnecessary drug," perhaps due to duplication of a drug. For instance, the pharmaceutical care practitioner identifies that the diabetic patient is taking two types of insulin when only one is required. The second category is effectiveness, or how well the drug therapy is working. For instance, is the current dosage appropriate? Is there a new drug on the market that could be more beneficial to the patient? Is the dosage too low? Or is there a better administration form for the patient? The third category is safety; it addresses whether or not a medication is causing adverse drug reactions or interactions that could be harmful or toxic to the patient. The fourth category is compliance. Access is often a barrier to compliance; the patient cannot afford the medication or the co-pays, or cannot access a pharmacy due to transportation or an unsafe neighborhood. Other examples include a patient's lack of understanding of the instructions for self-administration of medication, lack of trust, or unwillingness to take the medication.

Table 3. Number of drug therapy problems (N=36 Patients)

		# of DTP	Percent
Indication	Needs additional drug therapy	48	40
	Unnecessary drug therapy	1	1
Effectiveness	Ineffective drug	6	5
	Dosage too low	28	23
Safety	Adverse drug reaction	10	8
	Dosage too high	8	7
Compliance	Inappropriate compliance		16
	Total	121	100

As Table 3 shows, the most frequent drug therapy problem patients experienced is "needs additional drug therapy" (23) to either treat or prevent previously unidentified medical conditions, followed by the category "dosage too low" (19) to provide effective therapy. In these cases, the dose or the frequency of administration needed to be increased to achieve goals of therapy. Both of these situations occurred more frequently than the category of "noncompliance." Thirteen patients were found to be noncompliant with their medications at some point during this 18 month project. The most frequent cause of noncompliance was because the patient did not understand the instructions about how to administer the medication.

The data are categorized by six quarters (three months in each quarter) to identify the number of drug therapy problems, number of encounters, and number of prescriptions (see Figure 5). This was necessary to determine if pharmaceutical care had an impact on improving health by decreasing the number of drug therapy problems over a period of time.

Figure 5. Drug therapy problems identified per quarter

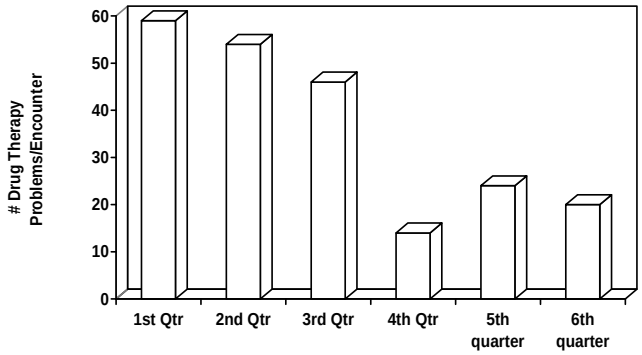


Table 4. Most frequent drug therapy problems and associated medical conditions

Medical Condition	Drug Therapy Problem Category	#
Diabetes	Needed additional drug therapy	9
Hypertension	Needed additional drug therapy	8
Diabetes	Dosage too low	6
Diabetes	Noncompliance	4
Angina Pectoris	Dosage too low	3
Hypertension	Noncompliance	3
Back Pain	Dosage too low	2
Osteoporosis	Needed additional drug therapy	2
Constipation	Dosage too low	2
Hypertension	Dosage too low	2

Table 5. Drugs most frequently involved in drug therapy problems

Drugs	Drug Therapy Problem Category	#
Salicylates	Needed additional drug therapy	8
NSAIDs	Adverse drug reaction	4
Calcium supplements	Needed additional drug therapy	4
ACE inhibitors	Noncompliance	3
Calcium	Dosage too low	3
Insulin	Dosage too low	2
Insulin	Dosage too high	2
Beta blockers	Noncompliance	2
ACE inhibitors	Dosage too low	2
Loop diuretics	Dosage too high	2

The drug therapy problems most often needing to be resolved involved common medical conditions including diabetes, hypertension, angina pectoris, and back pain. These are listed in Table 4 in order of frequency. These data demonstrate that drug therapy problems are a common occurrence and they are associated with common medical conditions.

The drug products most frequently involved in drug therapy problems in this sample include products commonly used throughout our health care systems. These medications were commonly assessed as being used in subtherapeutic or supratherapeutic dosages, causing either treatment failure or toxicity. The addition of preventive medications, including aspirin and calcium supplements, were often required despite the ample evidence of their efficacy in preventing heart attacks, strokes, and osteoporosis respectively. These are listed in Table 5 in order of frequency.

In the sample of 36 American Indian elders, the provision of pharmaceutical care services over an 18 month period had a positive impact on clinical outcomes. Over 50% of the medical conditions evaluated on at least two occasions improved with the provision of pharmaceutical care. One third remained the same throughout the 18 months of this study, while the status of 19 conditions declined despite the resolution of drug therapy problems.

The clinical impact of these services was also measured by the change in the number of medical conditions that were stable before and after receiving pharmaceutical care. The clinical outcome status of "stable" was defined as "the goals of therapy that have been achieved and no drug therapy problems exist requiring changes in medication or dosage" (Cipolle, et al, 2004).

One hundred and fifteen of the medical conditions were evaluated on at least two occasions. At the first evaluation, 82% of these medical conditions being treated with drug therapies were not stable. Of those, 62% improved with the provision of pharmaceutical care services by there last follow-up evaluation. This clinical improvement in achieving desired goals was the result of the pharmaceutical care practitioner identifying and resolving drug therapy problems.

This outcome shows that American Indians can benefit from pharmaceutical care. The data from this study generate hypotheses for future research affecting this population and provide a basis to begin looking at the drug-related needs of American Indian people residing on and off-reservation.

Faculty Development Programs in Geriatrics at UCLA

Those interested in any of these opportunities should contact Anne Hu at telephone (310) 312-0531; e-mail *annehu@mednet.ucla.edu*; or visit the website at *http://www.geronet.ucla.edu/centers/reynolds*.

Reynolds Mini-Fellowship in Geriatrics
February 20-22 and June 25-27, 2008

The UCLA Mini-Fellowship in Geriatrics is a three-day intensive course focusing on integrating geriatric content into the role of clinician-educator. Free enrollment for eligible participants. Must have a valid US medical license (MD, DO, etc.), faculty appointment, and limited geriatric training.

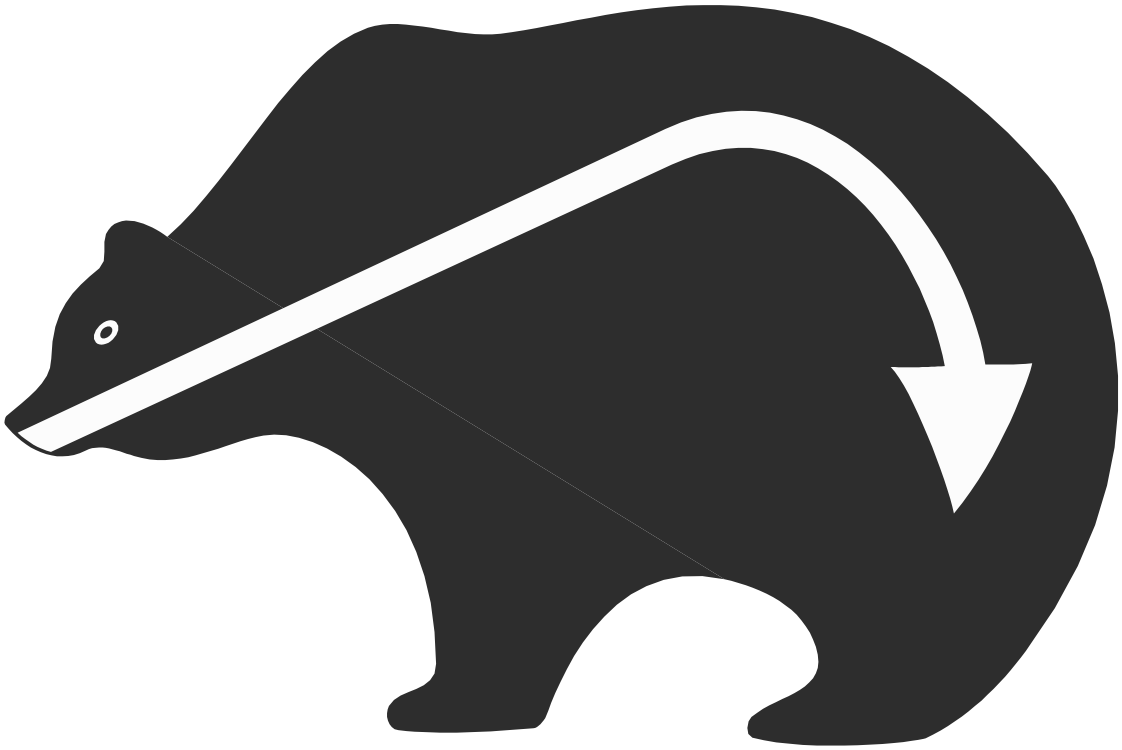
- Four tailored tracks to choose from: Generalist, Hospitalist, Palliative Care, and Skilled Nursing Facility.
- Topics include: Pain Management for the Elderly, Advanced Care Planning, Breaking Bad News, Delirium and Dementia, and much more.
- Interactive sessions include: standardized patient assessment, standardized student simulation, developing platform skills, and problem based learning.
- CME units available

Leadership and Management in Geriatrics
March 14-15, 2008

If you have ever felt challenged by a lack of leadership/management training, then Leadership and Management in Geriatrics 2008 is for you. LMG is an intensive and interactive program where you will be encouraged to consider novel business strategies for geriatric care.

Intensive Course in Geriatric Medicine
September 17-20, 2008

This intensive course in geriatric medicine emphasizes a functional assessment approach to comprehensive care of older adults and is directed toward health care professionals who care for older persons, and toward faculty in teaching programs in geriatrics and gerontology.



How to Create Scopus™ Alerts

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

Do you need to receive automatic alerts on a specific topic or author? The *Scopus*™ database has an alert service and includes scientific, technical, medical, and social sciences literature from more than 14,000 peer-reviewed journals. It is large, interdisciplinary, and includes cited references for articles published after 1995.

Scopus Alert Types

Four types of alerts can be created in Scopus:

- Subject,
- Table of Contents,
- Author, and
- Citation Alerts (tracks new citations to a particular article).

With these alerts, you can stay current on a particular topic, browse a journal's latest issue, see the latest publications of a particular author, or identify new articles that cite a particular article.

Steps to Creating Scopus Alerts

1. Develop your search strategy.
2. Click Alert Me from the Document Display page. The Add a Document Citation Alert page will display. 1.
3. Choose a name for your alert and enter it in the Name of Alert field.
4. Enter in the E-mail Address field the e-mail address to which you want your alerts to be sent.
5. Select how often you wish to receive the Alert: Daily, Weekly, Monthly from the Frequency List. You can also select Inactive for times you do not wish to receive alerts.
6. Select either HTML or Text Format from the E-mail Format section.
7. Click Submit to save the Document Citation Alert or click Cancel to discontinue creating the Document.

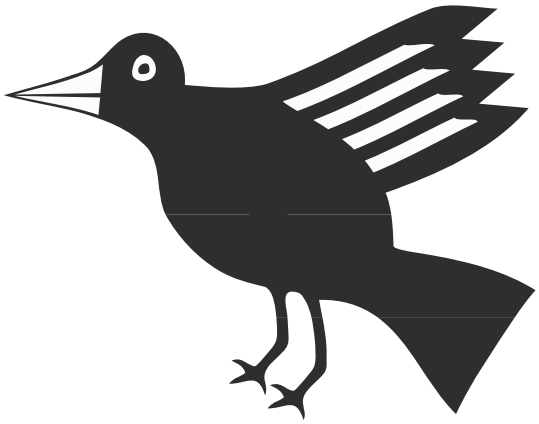
Differences between Scopus and MEDLINE/PubMed

Scopus has a much broader scope, including the 5,000 plus journals in MEDLINE®/ PubMed® as well as more than 9,000 journal titles from other disciplines. This can be good or not so good, depending on your situation. There is an advantage to getting articles from many different disciplines, but it is common to get more results that are non-relevant in Scopus. For subject-based alerts, Scopus works best with very specific, non-ambiguous topics. For authors, it is more effective than MEDLINE/PubMed because Scopus will find your author's works in journals not indexed in MEDLINE.

Scopus includes cited references for articles published after 1995. This allows searching to identify subjects or authors for your citation alert from 1995 forward in time. Scopus does not include a single subject vocabulary (thesaurus) such as Medical Subject Headings® (MeSH®) in MEDLINE. It is, therefore, more challenging to construct an authoritative search in Scopus. It is advisable to try various synonyms of terms and/or consult with a librarian to develop the most effective and efficient search strategy for a subject-based alert.

To access *Scopus*, mouse-over Research Tools on the green menu bar of the HSR Library website and click on ***Databases*** from the drop-down options. *Scopus* is listed alphabetically, near the bottom of the page. You can also access it on the left panel of each web page of the HSR Library.

For more information about using *Scopus*, contact Diane Cooper, Informationist and Biomedical Librarian to the Indian Health Service, HSR Library, a branch of the NIH Library, *cooperd@mail.nih.gov*; telephone (301) 594-2449.



IHS Child Health Notes

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.

Quote of the month

"Nothing significant will ever be accomplished if all possible objections must be dealt with beforehand."

Winston Churchill

Article of Interest

A randomized, controlled trial of a removable brace versus casting in children with low-risk ankle fractures. *Pediatrics*. 2007 Jun;119(6):e1256-63
http://pediatrics.aappublications.org/cgi/content/abstract/119/6/e1256

Recent studies have shown that casting may not be necessary for some common childhood fractures such as buckle fractures of the wrist. A recent double blinded, randomized, controlled study in Canada looked at treatment of low risk distal fibular fractures. They compared the standard treatment of four weeks in a fiberglass walking cast with a removable air stirrup ankle brace. At four weeks post-injury, the children with the ankle brace were more likely to have returned to regular activities. These children were more likely to have been "very happy" with their treatment and had fewer unscheduled return visits for complications. The cost of ankle bracing was also lower.

Editorial Comment

This study is particularly helpful for IHS and tribal sites that are often rural, remote, and without ready access to orthopedic specialty care. These low risk fibular fractures, like low risk wrist fractures, can be treated with bracing in a primary care clinic. Patients get better faster, with fewer complications of casting, and costs are minimized.

Article of Interest

Superhero-related injuries in paediatrics: a case series. Davies P, Surridge J, Hole L, Munro-Davies L. Arch Dis Child. 2007;92:242-243.doi:10.1136/adc.2006.109793.

The authors describe five patients between the ages of 3 and 8 years of age who sustained serious injuries while dressed up as superheroes (4 Spiderman, 1 Superman). They speculate that the wearing of full costumes may have led children to believe their own powers had been given a super boost. The authors, all British, describe, how "all were injured after initiating flight without having planned for landing strategies." The authors also point out that all of the injured were boys. Commercial role models for girls are less likely to show risk taking behaviors: there are no known instances of "My Little Pony" related injuries.

Infectious Disease Updates
Rosalyn Singleton, MD, MPH

Influenza Vaccination for 2007-8

- **Influenza disease Predictions for 2007-8**
  - Some experts are predicting that the 2007-8 Flu season could be the worst in years. Australia is facing its worst influenza season since 2003, and it's possible the US may expect the similar pattern after two mild seasons.
- **IHS Childhood Influenza Immunization Rates, 2006-7**
  - In the IHS 3rd Quarter Immunization Report, among nine reporting IHS Areas, 55% (range 14% to 65%) of 6-23 month old children received at least 1 influenza vaccine during the 2006-7 season.
- **Influenza vaccine Recommendations 2007-8**
  http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5606a1.htm
  - Routine vaccination of 6-59 month olds.
  - Importance of 2 doses for children 6 mo-8 yrs being vaccinated the first time.
  - NEW! Children 6 mo-8 yrs who received only 1 dose in their first year of vaccination should receive 2 doses the 2nd year they are vaccinated.
  - Vaccination of household contacts and caregivers of children birth-59 months old.
  - Timing of Influenza vaccine: Early October through March.
  - National Influenza Vaccination week is November 26 – December 2.

Inactivated Influenza (TIV) Vaccine Products

Vaccine	Package	Dose	Age	Thimerosal
Fluzone (Sanofi)	Multidose	Age-dependent	>6 mos	Yes
	Single dose syringe	0.25 mL	6-35 mos	No
	Single dose syringe	0.5 mL	>36 mos	No
	Single dose vial	0.5 mL	>36 mos	No
Fluvirin (Novartis)	Multidose vial	0.5 mL	>4 yrs	Yes
Fluarix (GSK)	Single dose syringe	0.5 mL	>18 yrs	Trace
Flulaval (GSK)	Multidose vial	0.5 mL	>18 yrs	Yes

- **Live attenuated Influenza Vaccine (LAIV)**
  - New refrigerated (NOT FROZEN) formulation this season.
  - Approved only for 5-49 year old healthy persons – Medimmune is applying for expansion of the licensure down to 1-2 years of age. Should hear soon!
- **Flu Vaccine Supply predictions:**
  - So far there are no predictions of vaccine shortages or delays.
  - National Foundation of Infectious Disease press conference Sept 19

Recent literature on American Indian/Alaskan Native Health

Doug Esposito, MD

Article

Barry M. The tail end of guinea worm - global eradication without a drug or vaccine.
NewEngl J Med. 2007;365(25):2561-4.
http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=17582064&ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum

Editorial Comment

So, how does an article on the global eradication of dracunculiasis, or guinea worm, relate to American Indian/Alaska Native Child Health? Please read on to find out! As most of you are aware, dracunculiasis is likely to become only the second human disease in history to be eradicated from the face of the planet through human intervention, the first, of course, being small pox. From an estimated 3.5 million cases in 1986 to a few over 25,000 cases in 2006, and from 20 countries with endemic disease down to just nine in the same period (five of which reported fewer than 30 cases each), guinea worm is taking its last gasp. What is so remarkable about this achievement, though, is that this progress has been made without drugs or vaccines, and for a total estimated cost of around $250 million. The progress made to date has almost entirely been accomplished through a grass-roots public health movement and generalized changes in behavior of populations. "Its demise will be proof that people can be persuaded to change their behavior through innovative health education."

I will refer the reader to the article itself to review the specific details of the dracunculiasis eradication effort and not repeat them here. The point that I would like to make is that it really is possible to change behavior on a population level, as evidenced by this incredible achievement. So why then is greater progress on such issues as obesity, diabetes, and motor vehicle related morbidity and mortality so elusive? I suppose we just haven't yet managed to get it right! The medical and public health communities have not been able to make sufficient inroads into the consciousness of the population as a whole or to counter the significant social, political, and corporate forces that stand in opposition to positive change. As such, a sufficient societal response to these problems in the form of broad behavioral change has not yet been achieved.

One might argue that the afflictions of the developed world are somehow just a little more complex than a simple endemic helminthic infestation of the developing world, that the interplay between health behaviors and societal, political, and corporate forces are somehow more intricate in the US (please see the article in "Additional Reading" below for a fascinating example of just one aspect of that complexity in our own society). Yes, obesity is a difficult issue, with complex and powerful modulating forces at work. But no matter how simple the process of collecting clean water in the developing world might seem, it is an incredibly complex process that is subject in my opinion to many of the same forces that have led to overeating, poor physical activity, and low passenger restraint use rates in our world.

As overwhelming as health problems like obesity, diabetes, and injury are, I, for one, take heart in knowing that successes like the impending guinea worm eradication are possible, without drugs, immunizations, complex technologies, or mega-bucks! Population-level behaviors that result in disease and illness CAN be changed. The impossible really is possible! I guess the bottom line is that we will just have to keep trying until we get it right. We will get there, hopefully sooner rather than later.

Additional Reading

Jones MM, Bayer R. Paternalism and its discontents: motorcycle helmet laws, libertarian values, and public health. *Am J Public Health*. 2007 Feb;97(2):208-17
http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=17194856&ordinalpos=2&itool=EntezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum

Article

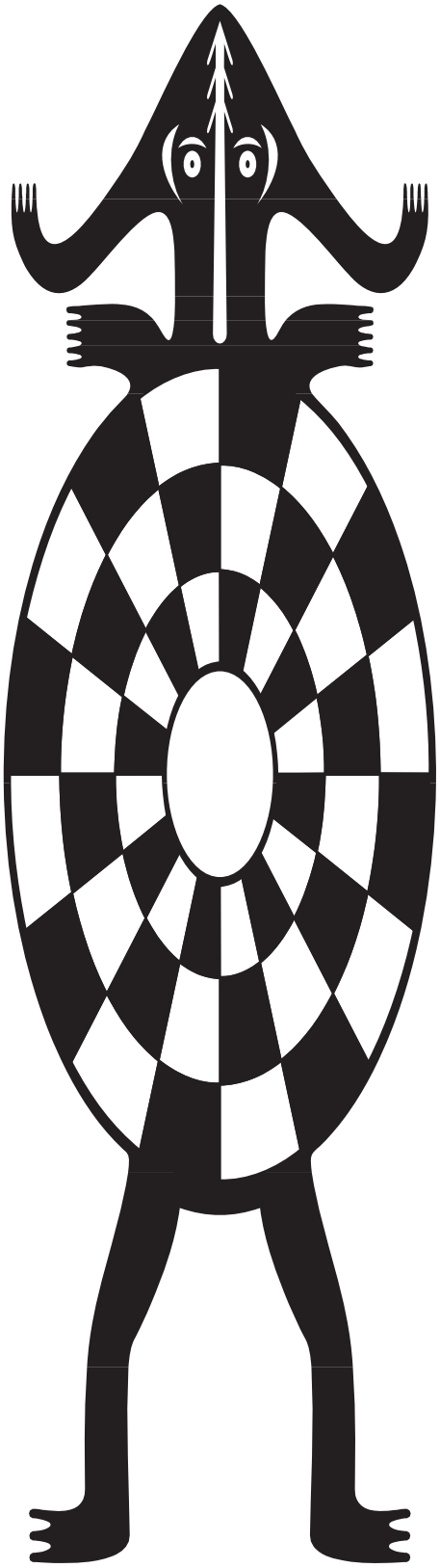
Brugge D, Delemos JL, Bui C. The Sequoyah Corporation fuels incident and the Church Rock spill: unpublicized nuclear releases in American Indian Communities. *Am J Public Health*. 2007;97(9): 30-5
http://ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=17666688&ordinalpos=3&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum

Editorial Comment

This is an interesting article about two significant accidental nuclear releases into the environment that occurred in two American Indian communities and the possible reasons why these events never really received much interest or mention in the press or the scientific literature. In fact, I had never really heard of either, despite the fact that the largest of the two incidents (the Church Rock, New Mexico incident was more than three times larger in terms of estimated curies of radiation release than the infamous Three Mile Island incident) occurred less than 45 miles from where I now reside! The authors contend that the reason so little interest has been paid to these two incidents might have something to do with their having occurred in rural, low-income, American Indian communities. I would suggest reading this interesting article and deciding for yourself.

Announcements from the AAP Indian Health Special Interest Group
Sunnah Kim, MS
Locums Tenens and Job Opportunities

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



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