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A Strategy for Information Technology Implementation

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Abstract

Medical information technology continues to expand at a lightning pace. This article will look briefly at current information technology within Indian health care systems. It proposes a comprehensive strategy for providers to use when evaluating and planning for their local information needs and visions. With increased reliance on computer systems and their infrastructure, it is vital that local planning efforts use proven strategies to achieve their information technology goals.

Current Status of Medical Informatics Within the Indian Health Care System

The information technology (IT) system used by the majority of the direct Indian health care facilities includes a reliance on the Indian Health Service (IHS) computerized patient record, the Resource and Patient Management System (RPMS) and its physician interface, the Patient Care Component (PCC). The RPMS consists of multiple applications that have historically been clinically driven. Additionally, the RPMS was also designed to ensure that population health statistics could be easily obtained by providers as well as administrators.

Historically, the focus of IT throughout IHS has been the delivery of health care and assessment of clinical performance, although recently there has been increasing attention to fiscal concerns. The “heart” of the local RPMS system continues to be the PCC that is completed at each clinical patient encounter as a record of the visit, and which permits the various components of the health summary to be fully utilized by clinical staff. The health summary, generated from data accumulated from PCC encounter forms, supports an organized approach to individual health care by the clinical staff. Clinical charting, the capability to evaluate clinical process, provider profiling, and ongoing, computerized outcome measurements are all potential uses of full implementation of the PCC and RPMS.

In addition, the RPMS system supports a comprehensive clinical data repository, both within the local systems, and

system-wide as a national Indian health database. These repositories include both demographic and visit data. Applications such as Fileman and Q-man can be used locally to perform data searches and to generate reports. However, the lack of a single master patient index throughout IHS makes national data searches more difficult. As the system was historically driven by clinicians, there has been and continues to be an ongoing emphasis on patient care, as well as the implementation of disease management reminders and guidelines. More recently, software applications development has focused on Year 2000 problems and billing issues.

Local staffing for on-site IT support has been a recurrent problem in the direct IHS, tribal and urban (I/T/U) sites. Ongoing difficulties with recruitment of talented and qualified people into rural areas remains a great concern. In addition, limited fiscal resources to pay competitive wages has hampered many facilities.

The majority of sites that do not currently use RPMS nevertheless rely on some form of computerized patient record for

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data aggregation. The following suggestions are pertinent to any organization, independent of their current information technology solution.

How to Move Forward

Most I/T/U sites are looking at their future IT needs, and are attempting to develop plans that will address these needs. The following strategy includes specific recommendations for individual sites to consider when evaluating their IT needs and goals. These specific recommendations are considered integral to the achievement of improved local IT and its infrastructure. Local IT plans can and should be evaluated using the following strategic elements:

1. Formulation of an IT mission statement, or incorporation of the IT mission into the larger mission statement of the organization
2. Development of a multidisciplinary IT committee
3. Provision of computer access throughout the health care facility, including clinical areas (to allow use of new RPMS and training tools)
4. Enhancement of computerized billing applications and processes
5. Provision of adequate access to training and technical support
6. Provision of access to the Internet for medical staff and patients
7. Health library service availability
8. Digital telemedicine capability when appropriate
9. Dial-in access for remote clinic sites
10. Support for at least one medical staff member to become actively involved in IT issues at the facility
11. Adequate funding

Formulation of an IT Mission Statement

Most health care organizations, both public and private, lack an IT mission statement. However, health care organizations that are leaders in the IT arena are driven by their mission statement. The mission statement should embody the future. This statement could be as simple as this one:

Access to the right data at the right time in the right place

Multidisciplinary IT Committee

It is essential to include ongoing planning for IT and information systems within the strategic planning of any organization. This process should be done in a similar manner to other ongoing quality improvement efforts, and should utilize a performance improvement model, including ongoing evaluation, assessment, and change. The use of this model results in an iterative process that can be continuously evaluated.

In addition, a multidisciplinary team is essential to ensure that information technology/information system decisions appropriately reflect the interests of all the stakeholders, including the patients. This team should be formulated under the direction of the CEO, and should report directly to the hospital or ambulatory care site decision-making body (e.g., the Executive Committee). In addition, tribal as well as patient involvement and representation would be critical to the success

of this committee. Ideally, this committee would use a public health approach, and rely on outcome measures of improved health status of both individuals and the population as a whole as indicators of success. This encompassing approach would help ensure that health information technology would not be created in a vacuum, but would be integrated with other tribal needs and desires, as well as health care goals.

Computer Access Throughout the Health Care Facility

There should be adequate computer access throughout the facility. For some sites, this might mean access in each examination room. Terminals should be configured to provide RPMS, Internet and Medline, and regional medical library access. National and local training materials, facility policies and procedures, directories, and practice guidelines could be available on a local intranet server.

Enhanced Computerized Billing Applications

Billing is a critical issue for every health care facility. Ideally, any billing package would be an integral part of the patient care computerized patient record. Smaller facilities could consider use of a billing service rather than building their own business office infrastructure.

Improved Access to Training and Technical Support

There are many explanations for existing data access and integrity problems within the I/T/U setting. However, necessary for accurate data input is familiarity with and ease of use of the data collection tools. Most computerized patient records use the encounter record as the data collection tool. Effective use of any computerized patient record system requires initial orientation and ongoing training for users. Without this, providers cannot be expected to use any system effectively.

The providers should receive a mandatory orientation session on the computerized patient record system (e.g., RPMS) within their first two weeks at the facility; all providers should receive regular updates and retraining, either by another provider or by a designated IT person. There are distinct advantages to having another provider be involved in this training; such a provider can become a "superuser" or "clinical champion" (see below). This would also establish an on-site resource and allow continuous feedback for the providers and data entry and support staff.

Ongoing development of "Windows-like" graphical user interface screens for RPMS might significantly decrease the training requirements. Additionally, on-line tutorials and improved user manuals will allow for training at the provider's convenience.

Improved Access to the Internet for Medical Staff and Patients

Internet access has become a critical necessity for providers. As our medical knowledge base grows exponentially, there is an increasing concern among medical providers about how to "keep up." These needs are driven by the problems of delivering high quality health care in rural or urban sites that may be a underfunded and understaffed, to say nothing of the incredibly rapid growth of medical knowledge.

The Internet, when used appropriately, can be an effective tool that fosters appropriate and timely care.

Patient access to the Internet would be an added service to our population. National estimates suggest that the American Indian population accesses the Internet at a dramatically lower rate than the general population. One of the goals of the IHS is to improve the health status of our service population. Establishing Internet availability within our facilities could potentially contribute to this goal, and could have additional benefits. The concept of information “kiosks” has been tested in certain settings and has been found to be useful. Similar projects within our facilities, with appropriate instructions and “people” support, could lead to increased familiarity with this technology, as well as increased access to patient information and resources. Well respected sites could be bookmarked to increase ease of patient use. This idea, like most of these strategies, would need to be evaluated once it is implemented.

Telemedicine Capability

Establishing the capability to deliver health care (teleradiology, for example) via telemedicine could be one fiscally prudent way to improve direct health care access. The issues of telemedicine are site-dependent, and require site-specific evaluation of needs, goals and resources. More information is available at the telemedicine site at <http://telehealth.hrsa.gov/>.

Telecommunications Access for Remote Clinic Sites

This is an issue that is dependent upon tribal involvement. Needs for access from remote sites must be evaluated and discussed with all participants. It would be imperative to build on existing tribal relationships to ensure that plans for modem and phone line access to remote sites were established.

Superuser Development

One common factor emerges at the IHS sites that have developed and implemented successful, long-term IT strategies: identification of and support for a superuser. This concept intuitively makes sense, as providers tend to look initially at IT as something foreign and of little obvious benefit to either themselves or their patients. A staff superuser is able to demonstrate the uses and advantages of an IT system.

The creation of a superuser begins by cultivating the interest of a provider (not necessarily a physician) and working to ensure that this individual receives adequate support and training for the current IT system. In addition, ideally this individual would be involved in recommending IT decisions (in conjunction with the medical staff), and in developing and providing IT education. This education would be targeted to current IT needs and to ongoing exposure to new and innovative techniques. Part of the increased national IHS involvement in the Government Computerized Patient Record Project requires ongoing clinical input. This cooperative venture between the IHS, the DOD, and the VA can be expected to yield both local and national advantages for our Agency. Local superusers would have a unique opportunity to be involved in this national project.

Adequate Funding

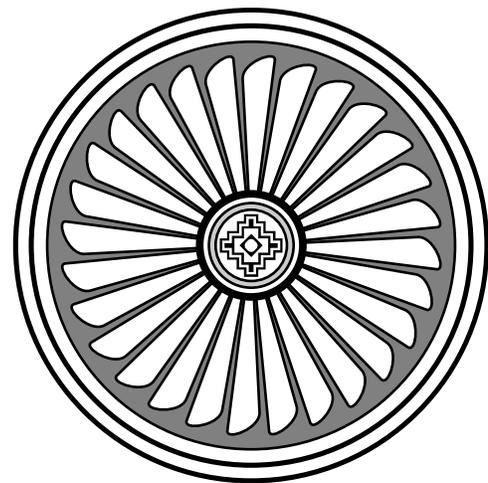
The current level of funding for IT within commercial health care organizations and health maintenance organizations

is estimated to be between 3% and 8% of the annual budget. Adequate IT funding is essential to the success of any proposal. At present, most sites within the I/T/U setting do not designate this amount of funding for IT needs at their facilities.

It is difficult to project the financial return that would result from this level of funding. In addition, there are other measurable benefits that our organization could use to evaluate their return on investment for this spending strategy. In the past, the IHS has evaluated patient satisfaction, access to care, and improved population-based health statistics, among other things. These parameters should be positively impacted by the above plan. Consequently, the return on investment would need to consider these outcomes, as well as enhanced provider satisfaction and tribal perspectives.

Why Do This? Does It Matter?

With patients having more choices for their health care provider, we must ensure that our health care delivery system is culturally appropriate, responsive, friendly, and caring, in order to maintain our subscriber base. Our mission reflects the IHS commitment to continually improve the health status of the population that we serve. Improved technological abilities, as well as increased access to services, can have an impacts on the community far beyond simple measurements of health status. These improved technological capabilities are essential to our mission. □



Case Studies of American Indian Elders Residing in a Nursing Home: Impact of Physical Therapy and Restorative Care

Robert Sandstrom PhD, PT, Associate Professor, Department of Physical Therapy, Creighton University, Omaha, Nebraska; and Collette Livingston RN, Director of Nursing, and Wayne Tyndall, Health Planner, both from the Carl T. Curtis Health Education Center, Macy, Nebraska

Abstract

Decline in functional status is a common problem in nursing homes. In this paper we describe the change in functional status and the impact of physical therapy and restorative care for nine Native American elders residing in a nursing home. The Institute of Medicine model of the “disabling-enabling” process is introduced and discussed. Multiple biologic impairments were present in the study group. Resident cognitive status, social support, and motivation to preserve walking function decreased behavioral risk factors for further disablement. The cases described in this paper reinforce the theory that preservation of ambulation function is important to prevent serious decline in resident functional status and increasing demands on external caregiving.

Introduction

The aging of the Native American population raises new issues for health care providers working in American Indian/Alaska Native communities. The abilities to move about in one’s environment and to perform routine activities of daily living are commonly impaired in an elderly population. Within institutional environments, regression in the ability to perform these functional tasks limits independence and quality of life, while increasing the demands on caregivers.

We previously reported on the status of impairments and functional limitations in a sample of residents of the Carl T. Curtis Health Education Center nursing home owned and operated by the Omaha Tribe of Nebraska.¹ We described a wide variety of conditions in this population, including cognitive dysfunction, joint range of motion limitations, muscle weakness, and balance dysfunction. In spite of these impairments, a majority (9/15) of the residents retained an ability to ambulate in their environment.

We believe that maintenance of and improvement in ambulation function are high priorities in a long term care facility population, and that loss of ambulation will lead to further decline in function and mobility. We theorize that many residents of long term care facilities have poor rehabilitation potential to regain lost functional ability due to multiple impairments and comorbidities. In this paper, we update the status of the nine residents who were ambulatory at the time of

our initial assessment and present case studies of three residents who we believe are representative of the problems faced by therapists and restorative care workers in nursing homes. Finally, we will explain the changes seen in this population, by applying a theoretical framework on disablement developed by the Institute of Medicine of the National Academy of Sciences.

Results

In our first report we identified two patients who we believed were at significant risk for loss of ambulation function. One of those patients died within three months of our initial evaluation. The second patient’s case is presented here.

Case #1 A.B. is an 89-year-old female elder who has resided in the nursing facility for about four years. The primary medical problems experienced by A. B. are congestive heart failure and a prior right cerebrovascular accident. Comorbidities include diabetes mellitus and a past history of a mastectomy for breast cancer.

At the time of our first evaluation, A.B. could ambulate a distance of ten feet with a wheeled walker and moderate assist of one person. She required moderate assistance with a pivot transfer and maximal assistance with bed mobility tasks. She was able to sit independently for 30 seconds and reach across the midline without falling. She could not maintain a stable, independent standing position without support. She displayed a spastic, flexed left upper limb with decreased range of motion at the shoulder and elbow. Her strength was decreased in all limbs from normal expectations (fair to fair plus). She was alert and scored a 19/30 on the Folstein Mini-Mental State Examination (MMSE). She was not motivated to ambulate (“I got stroke and I quit walker.”) and was fearful of falling (“I don’t want to fall.”) or of an episode of incontinence when walking.

During the initial phase of the study period, A.B. would ambulate on average once per week. She required much external motivation to participate, would often refuse to walk, and a conflict situation would sometimes develop with staff over walking. Within six months, she ceased all attempts to ambulate and this goal was eliminated from her restorative care plan. She had one four day stay in the hospital for a urinary tract infection and hematuria. Medical evaluation noted increasing anxiety and dementia.

For this report, A. B. was reevaluated 15 months after the first evaluation. At this time, she is non-ambulatory and can propel her wheelchair only for short distances using the hall rail. She is fully dependent for bed mobility and transfer tasks.

She spends most of her day sitting in her wheelchair in the hallway and frequently requests the nursing aides to put her to bed in the afternoon.

On evaluation, she is able to sit unsupported for 30 seconds but can not reach across the midline without falling. She exhibits bilateral 20° hip flexion contractures, limited hip abduction range of motion, and persistent range of motion deficits in the left upper limb. Muscle strength has declined to less than anti-gravity strength in all limbs. She is drowsy and unable to participate in the MMSE.

Two of the original cases were described as having moderate risk for loss of ambulation function. One of these individuals, who had chronic renal failure, died during the study period. The second individual is described here.

Case #2 C. D. is a 79-year-old male elder who has resided in the facility for about three years. His primary medical problem is Parkinson's disease. Concomitant medical diagnoses include degenerative joint disease in the knees, congestive heart failure, status post aortic valve replacement and pacemaker insertion, and diabetes mellitus. His wife resides in a senior citizen housing area nearby or with him in the Center during the winter. She often encourages him to ambulate when asked to by the restorative aide. He complains of pain in his knees.

At the time of our first evaluation, C. D. could ambulate the 150 foot test distance in three minutes and twenty five seconds using an EVA walker and one person assistance. His gait demonstrated the characteristic Parkinsonian flexed, shuffling pattern. He was independent in his bed mobility skills and required minimal assistance with a pivot transfer. He was able to sit independently for 30 seconds, reach across the midline and touch the ipsilateral foot without falling. He could stand independently with eyes open and closed for thirty seconds, step forward, step back, and perform a 360° turn. His joint range of motion was within normal limits. Muscle strength was fair grade in all limbs. He was drowsy and scored a 13/30 on the MMSE.

C. D. ambulated on a near daily basis with the restorative aide during the study period. His usual route would be from his room around the hall to the day area (150 feet) or to a meal in the Center dining area. C. D. has not had any new, serious medical events.

For this report, C. D. was evaluated 15 months after the first evaluation. C. D. is ambulating the 150 foot test distance in two minutes and ten seconds using the EVA walker and one person assist. He continues to ambulate with a flexed posture and shuffling gait pattern. He is independent in bed mobility tasks and needs minimal assist with transfer tasks. Balance function is unchanged since the first evaluation. Range of motion is within normal limits. Strength is fair to fair plus in all limbs. C. D. is alert and scored a 10/30 on the MMSE. C. D. says that walking is important to him and that he will continue to ambulate with the restorative aide.

The final five cases were those of individuals who we

believed were at minimal risk for losing ambulation function. All of these patients have retained ambulation and mobility function during the study period. One (#13) has been recently admitted to the hospital for toe amputation of the right foot. She will require restorative care to regain ambulation function when the healing is complete. Unlike for those individuals in the previous two categories, restorative treatment was not utilized. Instead, these persons were encouraged to continue ambulation in the Center, to participate in recreational activities, and to avoid use of a wheelchair.

Case #3 E. F. is a 64-year-old male elder who has been a resident of the Center since September 1997. His primary medical problems are chronic renal failure and diabetes mellitus. He had a left cerebrovascular accident in 1984, which resulted in a residual right hemiparesis.

At the time of our first evaluation, E. F. ambulated the 150 foot test distance in one minute forty-five seconds. He was independent in all bed mobility and transfer tasks. He was able to sit independently for thirty seconds and to safely reach across the midline and to the ipsilateral foot when sitting. When standing, he could step forward, reach to the floor, perform a 360° turn, and maintain standing for thirty seconds with eyes open or closed. His right upper limb exhibited a flexed and adducted spastic posturing with only limited shoulder abduction/adduction movement present. The right lower limb had poor to fair strength on examination, but when standing, extensor muscle tone enabled him to support his body weight for ambulation. He walked with decreased right lower limb flexion and a Trendelenburg shift to the right to swing his limb forward. He was alert and scored 21/30 on the MMSE.

During the study period, E. F. regularly used the equipment in the Physical Therapy area for exercising his right arm. He frequently asked if new equipment would be available and said he missed the stationary bicycle that had been removed. He walked to meals and Center activities. He liked to listen to traditional music and read the newspaper daily.

E. F. was reevaluated for this report 15 months after the first evaluation. He can ambulate the 150 foot test distance in two minutes, occasionally using the hall rail. He is independent in bed mobility and transfer tasks. Balance function is unchanged except he cannot perform the standing floor reach task. Limb strength and range of motion are unchanged. He is alert and scored 26/30 on the MMSE.

Discussion

Impairment, functional limitation, and disability, i.e., the disablement process, are common to individuals who are elderly, as well as to residents of long term care facilities. Impairment is the loss of normal mental, emotional, physiological, or anatomical structure or function. Functional limitation is the inability to perform an activity (e.g., walking or dressing) due to an impairment. Disability is the limitation in performing a socially defined activity within an environment

(e.g., recreation or employment).² Rehabilitation “strives to reverse what has been called the disabling process, and may therefore be called the enabling process.”³ These case studies illustrate what has been termed the “enabling-disabling process” at work in a nursing home. Treatment focuses on restorative care to maintain and if possible, improve ambulation.

Disability is the result of an interaction between the individual and his or her environment. The Institute of Medicine model outlines a set of biological, behavioral, and environmental factors that predispose an individual to the onset of the disablement process, usually precipitated by a new medical or social event. A. B., who was theorized to be at high risk of functional loss at the study outset, experienced significant further disablement during the study period. She had multiple biological pathologies, impairments, and functional limitations, and can be classified as “very old” (89 years of age). She had one discrete, new event (a hospital stay) and perhaps a number of smaller disabling events (progressive cognitive decline) during the study period. A. B. had low motivation for ambulation. She had conflicts with staff about walking and, ultimately, refused treatment. When this occurred, the restorative care plan changed to support the need for regular range of motion and positioning activities to prevent further physical decline. While this has been generally effective, A. B. has experienced serious decline in functional ability, producing increased demands on the caregivers.

The other two cases describe optimal results of an enabling process achieved through restorative care and physical therapy intervention. C. D. has had no significant loss of function in the fifteen month study period. While significant biological risk factors are present, the risk of functional loss has been averted through regular restorative care services and strong resident motivation to walk. E. F. illustrates an approach to care that provides only encouragement, consultation, and occasional follow-up. This approach reinforces resident decision-making and self motivation, and avoids dependence on Center staff to initiate resident activity. Both C. D. and E. F. have not had a significant new medical event that would initiate a new set of impairments, functional limitations, and disabilities to contend with.

Conclusions

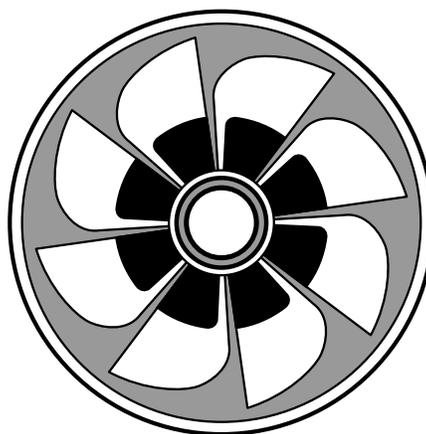
In this paper, we describe the results of physical therapy and restorative care in preventing and improving impaired functional mobility in a nursing home population of Native American/ Alaska Native elders. The cases in this study support the premise that intervention to maintain and improve ambulation ability in this population is effective. Loss of ambulation ability in the one observed case was associated with a serious decline in mobility and resident independence. Alternatively, the maintenance of ambulation function has been found to prevent decline in function for residents at risk of generalized decline in mobility status.

Acknowledgments

This study was supported by the Health Resources Services Administration through grant D37-AH-00634-01 “Building Community: Collaborative Education among Occupational and Physical Therapists with Native Americans in Rural Nebraska” to the School of Pharmacy and Allied Health Professions, Creighton University, Omaha, Nebraska.

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Who's Mid-Level?

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Nurse practitioners and physician assistants in Indian health are sometimes referred to as “mid-level providers” or “physician extenders.” Usually the term is simply used unknowingly, as a shortcut method to describe different categories of nonphysician providers. Many individuals using this terminology are unaware of the implications of the language and its political and ethical ramifications. Nevertheless, use of the mid-level or extender terminology when referring to advanced practice nurses (APNs) poses problems for registered nurses and APNs, as well as the facilities in which they work.

In nursing documents and policy manuals, IHS nomenclature for nurse practitioners is “advanced practice nurses.” APNs include certified registered nurse anesthetists (CRNAs), certified nurse midwives (CNMs), and certified registered nurse practitioners, such as family nurse practitioners (FNPs), pediatric nurse practitioners (PNPs), geriatric nurse practitioners (GNPs), adult nurse practitioners (ANPs), and so on.

In June 1997, APN delegates were selected from service units from across the nation to meet and discuss issues impacting APNs in IHS. Five position statements were drafted by the group. They recommended that the nomenclature “mid-level provider” and “physician extender” be retired from use. The terms can be offensive in their implications. When the term “mid-level” is used, it is offensive to our RN colleagues who feel that, by definition, this makes them “low-level”

providers.

Further, patients sometimes hear this terminology and feel shortchanged that they did not get the “high-level” provider. It is difficult to explain to these patients that we are not at the “mid-level” of our profession, but at the top of it. Moreover, depending on the circumstances, patients often will receive the best care from an APN using the nursing model of care and treatment with its focus on wellness, prevention, and the whole person. An ample body of nursing research supports this point.

In January, Robert A. Hall, RN, APN, former five-time Senator from Massachusetts, and the executive director of the National Association of Pediatric Nurse Associates and Practitioners (NAPNAP) called for national action on the part of APNs to end the “mid-level” terminology. Mr. Hall went on to state, “the term ‘mid-level practitioner’ is often used by groups with a financial interest in limiting patient choices and keeping RNs from practicing to the full extent of their education and experience. As such, it is a political term, designed to imply that the patients seen by the APNs are somehow not getting the best care.”

In view of these observations, do we really want IHS patients to feel somehow duped or shortchanged? APNs and RNs deserve much more credit and respect than they often get. Further, patients need to know that they are getting quality care from providers at the top of their profession. As Dr. Loretta Ford stated in 1980, “Nursing is not second class medicine, but first class health care.” □

The Annual Elders Issue

The May 2000 issue of THE IHS PROVIDER, published on the occasion of National Older Americans Month, will be the fourth annual issue dedicated to our elders. Indian Health Service, tribal, and Urban Program professionals are encouraged to submit articles for this issue on elders and their health and health care. We are also interested in articles written by Indian elders themselves giving their perspective on health care issues. Inquiries can be addressed to the attention of the editor at the address on the back page of this issue. □

Dental Services for American Indian and Alaska Native Elders

David B. Jones, DDS, MPH, IHS Geriatric Dental Consultant, Rockville, MD

IHS dental clinics can provide the most efficient and effective dental services for American Indian and Alaska native elders. The following reminders about the goals of treating elders are offered for your consideration.

Provide easily accessible emergency services. Make the dental visit as pleasant an experience as possible. When elders present with emergent dental needs, try to accommodate them so that they don't have to sit and wait for extended periods of time. Spend enough time with the elder patient so that they understand the need for a procedure to eliminate their pain or solve their problem. After treating the emergency, encourage the elder to return for a routine examination and preventive services.

Encourage elders to come in for dental preventive services. Remember that demographics are changing, and more elders will be living longer and retaining more teeth. Dental prophylaxis (cleaning of the teeth) and the application of fluoride in gel or varnish forms is as important for this age group as it is for children. Root caries, which occurs because

of receding gums, can be prevented very effectively with regular fluoride varnish applications.

Provide routine restorative (fillings) services of dental amalgams and aesthetic (composite) restorations.

Reward those elders who take care of their teeth and return for regular check-ups with replacement, removable denture services. Partial and full dentures can be provided on a limited basis in a time-efficient manner if the clinic devotes one clinician and one day per month exclusively to these services. The clinician can work more efficiently if he/she provides the same type of services for the entire day. Remember to place these patients with removable dentures on a yearly recall list. The appliances should be checked, and the elder should receive a thorough oral cancer examination.

In an upcoming article we will discuss the role of other health disciplines in helping to maintain the oral health of American Indian and Alaska Native elders. □

POSITION VACANCIES □

Editor's note: As a service to our readers, THE IHS PROVIDER will publish notices of clinical positions available. Indian health program employers should send brief announcements on an organizational letterhead to: Editor, THE IHS PROVIDER, The IHS Clinical Support Center, Two Renaissance Square, Suite 780, 40 North Central Avenue, Phoenix, Arizona 85004. Submissions will be run for two months, but may be renewed as many times as necessary. Tribal organizations that have taken their tribal "shares" of the CSC budget will need to reimburse CSC for the expense of this service. The Indian Health Service assumes no responsibility for the accuracy of the information in such announcements.

Dental Officer Mcloud (Kickapoo), Oklahoma

The Kickapoo Tribal Ambulatory Health Center has an immediate opening for a Dental Officer to join a team of health care professionals, providing the full scope of dental care to our patients. This is a new facility constructed in March 1999, serving a population of approximately 5200 Native Americans

who reside in the vicinity of the Kickapoo and Iowa reservation boundaries in Oklahoma. The facility is a designated federally qualified health center and is an approved IHS loan repayment program site. The clinic is only 30 miles from the Oklahoma City metropolitan area, one of heartland America's friendliest cities. No call coverage is required of this position. Comprehensive benefits include paid health insurance, and annual and sick leave. The salary is \$75,000 to \$85,000 per annum, depending on experience. Send CVs to Gary Wabaunsee, Health Director, Kickapoo Tribe of Oklahoma, P.O. Box 1360, Mcloud, Oklahoma 74851; telephone (405) 964-2081.

Project Assistant Northwest Portland Area Indian Health Board, Portland, Oregon

The NPAIHB has an opening for a project assistant with the NW Tribal Epidemiology Center. This position will provide support for the California Area Diabetes Surveillance Project. It requires a high school diploma with a minimum two years experience in administrative support, use of Microsoft Office

NATIVE AMERICAN MEDICAL LITERATURE □

The following is an updated MEDLINE search on Native American medical literature. This computer search is published regularly as a service to our readers, so that you can be aware of what is being published about the health and health care of American Indians and Alaska Natives.

The Clinical Support Center cannot furnish the articles listed in this section of THE PROVIDER. For those of you who may wish to obtain a copy of a specific article, this can be facilitated by giving the librarian nearest you the unique identifying number (UI number), found at the end of each cited article.

If your facility lacks a library or librarian, try calling your nearest university library, the nearest state medical association, or the National Library of Medicine (1-800-272-47887) to obtain information on how to access journal literature within your region. Bear in mind that most local library networks function on the basis of reciprocity and, if you do not have a library at your facility, you may be charged for services provided.

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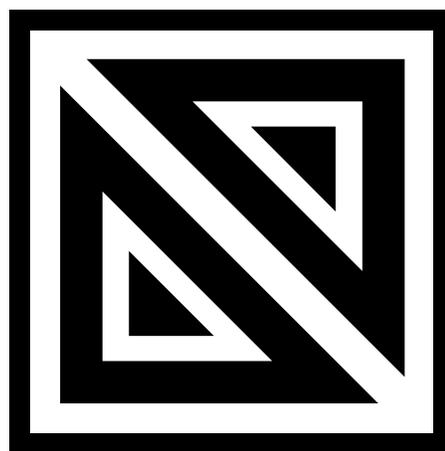
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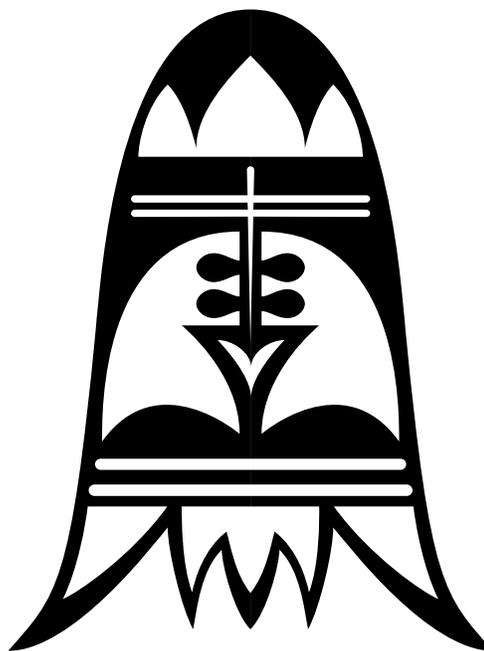
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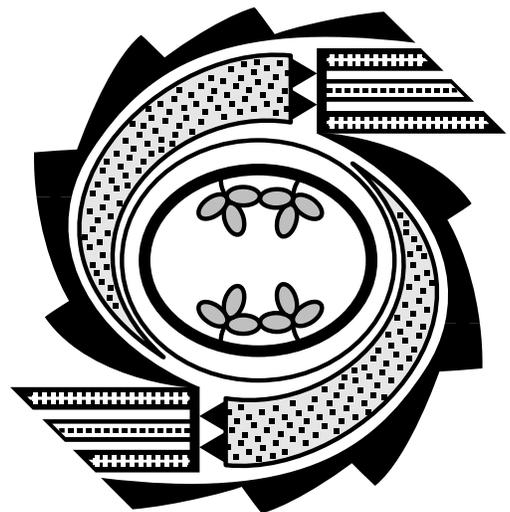
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