

# THE IHS PRIMARY CARE PROVIDER



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## Project TRANSAM

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Millions of dollars worth of medical supplies and equipment are being transferred to Indian health programs in a project known as TRANSAM, a cooperative venture between the Indian Health Service and the U.S. Department of Defense (DOD). In this effort, called a Civilian-Military Cooperative Action Program, medical equipment and supplies are transferred to the Indian Health Service (IHS) and tribal health programs from DOD medical facilities and installations that have been closed or reduced in strength. This project is a direct result of the lessened military threat to the U.S. across the world. This medical material (some of the equipment has never been used) has been distributed to tribal and federal health facilities serving American Indians and Alaska Natives throughout the U.S. during the past two years.

Section 8032 of Public Law (PL) 103-335, the National Defense Authorization Act of 1995, created the opportunity for TRANSAM. The chief sponsors of this legislation were Senators Daniel Inouye (D-Hawaii) and Ted Stevens (D-Alaska). These senators regard the project as an opportunity to address important domestic needs and enhance military readiness. Delivery of the material began in the fall of 1995, when more than \$6 million in medical supplies and equipment was distributed to 120 Indian health locations in the U.S. During August and September 1996, Project TRANSAM provided another \$4 million in medical material (most of which came from closed military installations in Korea, Turkey, Germany, and the United Kingdom) to 77 Indian health facilities.

A General Services Administration (GSA) warehouse in Fort Worth, Texas, is the terminal point for collection and distribution of TRANSAM medical material intended for facilities in the Indian health system. Deliveries arrive continuously to the warehouse, where IHS employees and U.S. Air Force Reserve personnel organize, codify, and inventory the material.

All types of medical equipment are represented. Oxygen analyzers and electric hospital beds, centrifuges and incubators, microscopes and fetal monitors, scrub sinks and surgical tables, operating tables and typewriters, ventilators and X-ray

machines, ultrasonic generators and electronic thermometers, and much more. Along with the equipment are medical supplies from Band-Aids to catheters, surgical blades, blankets, and bone plates. More than 1,600 separate items of medical supply inventory were received in 1996, all of it unpacked, marked, and stored at the warehouse before distribution to Indian health facilities.

### Distribution

During the summers of 1995 and 1996, property management representatives from IHS Area Offices surveyed and inspected the medical equipment at the warehouse. Based on this inspection, each IHS Area developed a prioritized list of equipment needed by health facilities in their respective Areas. A lottery was held among the 12 IHS Areas to determine the order in which the equipment was chosen. Similar distribution systems were developed within the IHS Areas, as well.

Before the Area lottery, however, IHS officials decided that some of the equipment and supplies would be set aside for the replacement health clinic that was destroyed by fire in May 1996 at Lame Deer, Montana. Additional material was set aside for the new Indian health facility at Fort Belknap in Harlem, Montana.

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After the lottery, the material was organized according to delivery location. The US Air Force Reserve (USAFR) 301st Fighter Wing, Carswell Field, Fort Worth, Texas, provided the logistic and personnel support for TRANSAM storage and deliveries. A master delivery manifest was created, delivery locations were determined, and the equipment and supplies were prepared for shipment.

The vast majority of TRANSAM '96 deliveries were conducted by delivery vendors, such as the U.S. Postal Service, United Parcel Service, and Federal Express. Deliveries to Indian health facilities in 18 states were completed by the end of September 1996. As an example of the wide dispersion of the deliveries, the Seminole tribal facility in Hollywood, Florida, received material, as did thirteen tribal facilities in California. Indian programs in Arizona and New Mexico received more than \$300,000 worth of the equipment and supplies, and Oklahoma Indian health facilities accounted for more than \$154,000. Deliveries to Indian health facilities in South Dakota, Minnesota, Michigan, and Wisconsin amounted to more than \$945,930.

Two military airlifts delivered equipment and supplies to Montana and Alaska. On September 14, 1996, the USAFR loaded a C-5 military aircraft with \$425,000 of medical material bound for the replacement facility at Lame Deer. When the aircraft landed at Billings Logan International Airport, USAFR personnel transferred the material to tractor-trailers and stored the cargo in a local warehouse. Through local television reporting of this activity, citizens of Montana gained a better sense of the impact that the destruction of the Lame Deer facility had on the people of the Northern Cheyenne Tribe.

On September 16, the aircraft flew back to Fort Worth, loaded more than \$1.2 million in equipment and supplies on the aircraft, and delivered the cargo to Anchorage, Alaska, for the new Alaska Native Medical Center and other health facilities in Alaska.

The total medical equipment inventory throughout the IHS is estimated at approximately \$224 million. Such equipment, on average, has an expectation of 6 years of productive use. Based on these figures, the IHS requires about \$37 million annually for medical equipment replacement.\* Project TRANSAM has provided the IHS with more than 10% of its annual medical equipment expenditures. Approximately \$1.2 million worth of medical supplies were also delivered in 1996.

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\* IHS Deputy Director Michel E. Lincoln's Budget Briefing to the National Indian Health Board, October 1996.

Michael H. Trujillo, MD, MPH, Director of the IHS, explains that the entire Indian health system benefits from TRANSAM. "Project TRANSAM will help us provide an increased level of care to our customers. Health programs managed by tribes and urban programs for American Indians and Alaska Natives will benefit from this operation, not just IHS facilities."

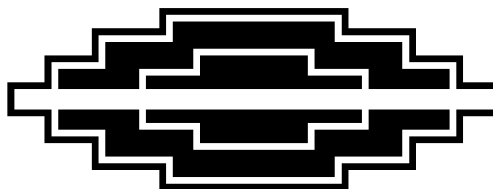
Projects like this are important for several reasons. They increase the understanding by the general public of the federal government's commitment to American Indians and Alaska Natives and generate public support for this activity. They justify future federal expenditures for TRANSAM and showcase federal partnerships and the responsible use of public resources.

### The Future of TRANSAM

The TRANSAM warehouse in Fort Worth has begun to receive equipment and supplies from DOD operations for delivery to the IHS during the summer of 1997. Medical material from Fitzsimmons Army Hospital, Denver, Colorado; Brooke Army Medical Center, San Antonio, Texas; and military installations in Memphis, Tennessee; Jackson, Mississippi; and Houston, Texas, are among the DOD facilities that have supplied medical material for TRANSAM '97. The Department of Veterans Affairs (VA) has joined the project in partnership with the IHS and the DOD and has begun to transfer medical material from VA facilities and supply centers.

Future TRANSAM activity depends on the needs of the U.S. military around the world. For example, the dollar value of material for TRANSAM '95 exceeded TRANSAM '96 by at least \$2 million, though reports in 1995 indicated that TRANSAM '96 would be at least twice as large as TRANSAM '95. According to DOD, when medical equipment and supplies were being collected for TRANSAM '96, the U.S. military became involved in the peacekeeping mission in Bosnia. The DOD material intended for TRANSAM '96 was rerouted to support military activities there. National security interests of the U.S. aside, Project TRANSAM is expected to continue for several years.

After several years of flat budgets and few cost adjustments, inflation and other operating expenses are affecting the ability of the IHS to provide primary care to Indian people. Indirect budget reductions can erode the resources devoted to patient care, and cooperative efforts like TRANSAM help the IHS conserve resources and continue delivering quality care to Indian people. □



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# Medical Student and Resident Experience in Alaska: A Question of Value

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## Introduction

Recruiting physicians and other health professionals to the Indian Health Service (IHS) through student clerkships and resident rotations has greater than a 30-year history. In the IHS, the clerkship/rotation has been an important component of recruitment for medicine, pharmacy, dental, nursing, physical therapy, and optometry. Previously, Agency funds were available for travel, housing, meals, and, in some cases, even salaries, for students/residents. With recent budget cuts, downsizing, compacting, and other changes in the IHS, the funds available to provide for student clerkships and rotations are reduced, threatened, and questioned as worthwhile by various entities.

Costs to support training time, meals, housing, and travel funds for students are not uniformly tracked throughout the IHS, and are, therefore, difficult to assess. The expense of housing and feeding medical students at one tribally-operated Alaska service site averaged about \$9,600 per student throughout the year. This site averaged two medical students each day per year. The site now charges the students for meals. The service unit investment is thus reduced to housing only, totaling approximately \$6,000 per student/year in lost rental revenue. Travel expenses to and from the site are also borne by the student.

Residents (usually second or third year family practice physicians) have their travel paid. Alaska Area physicians view residents as additional health care providers, whereas medical students are not capable of providing independent service and, therefore, consume rather than create additional staff time for patient care. The Alaska Area saves an estimated \$700,000 a year by using residents in lieu of temporary physician services. For categories other than medical (such as dental or pharmacy), students are often perceived as productive but closely supervised service providers.

In all, the Alaska Area provides training opportunities for approximately 160 students and residents (80 of each) annually, and denies more than 600 additional requests for training (from students, predominantly). In recent years, two sites have stopped taking medical students because of lack of space and/or customer dissatisfaction.

With administrative and fiscal pressure to justify the time and expense of providing student and resident training experiences at the new Alaska Native Medical Center in Anchorage,

information was needed in order to develop a response and take appropriate action.

General questions we wanted answered included: Is recruitment influenced by prior medical student and/or resident experience in the IHS? In the Alaska Area Native Health Service(AANHS)? How do current AANHS physicians value students and residents? To address these questions, physicians working in the AANHS were surveyed.

## Methods

A simple survey tool (see Figure 1) was designed to obtain information about whether, when, and where the AANHS physicians did IHS student clerkships and/or resident rotations. The survey also asked the AANHS physicians to assess the value of the program. The survey was mailed to all current AANHS physicians in March 1996.

## Results

Out of 164 physicians currently employed by the AANHS, 105 (64%) responded to the survey. Of the 105 physicians who responded, 56 (53%) indicated that they had had an Indian Health Service clerkship or residency rotation prior to working for the AANHS.

Survey responses were categorized as follows: no prior experience with the IHS, or prior IHS experience. Those with prior IHS experience were subdivided further: student, resident, or both student and resident, and then divided again, by location of prior IHS experiences, Alaska versus other IHS sites (Figure 2). AANHS physicians without prior experience in IHS were subgrouped into those "influenced" by someone who had had an IHS clerkship or rotation and those not so influenced.

Regarding the subjective, perceived "value" of clerkships and residency rotations, 98% of the responding physicians felt that medical students are "valuable," 99% thought that residents are valuable, and 82% of all respondents thought that the permanent absence of students and residents would negatively affect their program.

The survey allotted space for written comments regarding "why" students were considered important. Of the 105 respondents, 85 (81%) answered this question. A tally of the comments revealed some recurring themes, including recruitment (cited 26 times) and exposure to American Indians and Alaska Natives and their culture (cited 18 times). Fourteen physicians stated that having medical students around fosters their own professional growth. Of the 85 responses, only one was negative about having students.

**Figure 1. Survey tool mailed to all currently employed AANHS physicians, March 1996.**

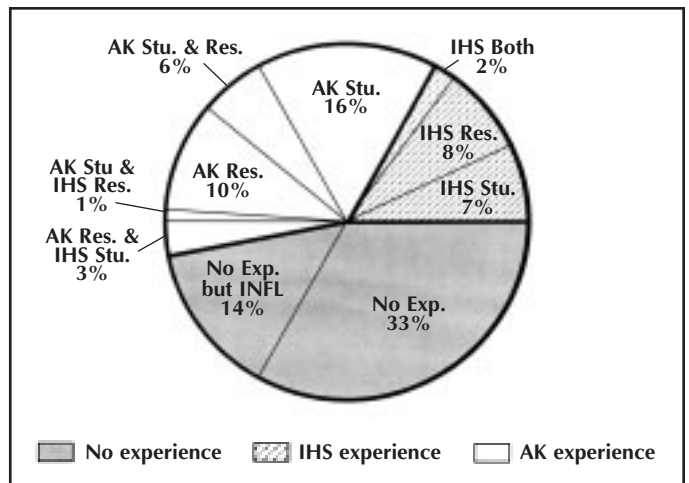
Please take a moment of your time to complete this survey. The purpose of the survey is to assess the relationship between medical student/resident rotations and recruitment of physicians for the Alaska Area Native Health Service.

Please answer all questions regardless of whether there are currently residents and students doing rotations at your work site. Please consider all medical students and residents working at your department or site regardless of the source. Who and where you are is important. Thank you in advance.

- Did you do a rotation as a resident or student in the Indian Health Service (either Fed or Tribal)?  
 Yes  No  
 If Yes, please answer below.  

Student	Where?
State: _____	Mo/Yr _____
Resident	Where?
State: _____	Mo/Yr _____
- Did your rotation/clerkship influence your career decision to work for IHS?  
 Yes  No
- Did you know of anyone who did an IHS rotation (either Fed or Tribal) who influenced your career decision?  
 Yes  No
- Do you think that medical student rotations are valuable?  
 Yes  No  
 Why?: \_\_\_\_\_
- Do you think that resident rotations are valuable?  
 Yes  No  
 Why?: \_\_\_\_\_
- Would the permanent absence of students and residents doing rotations at your site negatively affect your program?  
 Yes  No  
 How?: \_\_\_\_\_
- Which opportunities does your site (or department) provide? (check none, one, or both)  
 MS rotations  Resident rotations

**Figure 2. Percent of respondents (N=105) with and without prior IHS experience.**



Written comments about why residents were considered valuable were similar to comments about the students, with some emphasis on their productivity..

In response to the question about how the program might be negatively impacted by the permanent loss of students and residents, 34 physicians stated that their own professional growth would be restrained. Many comments suggested that not having students or residents might have a negative impact on recruitment. All comments are available from the author to anyone interested in reading them.

### Discussion

It is clear from the results of this survey that the responding AANHS physicians value having both medical students and residents in the system. No relative value was asked for in comparing students and residents to other programs.

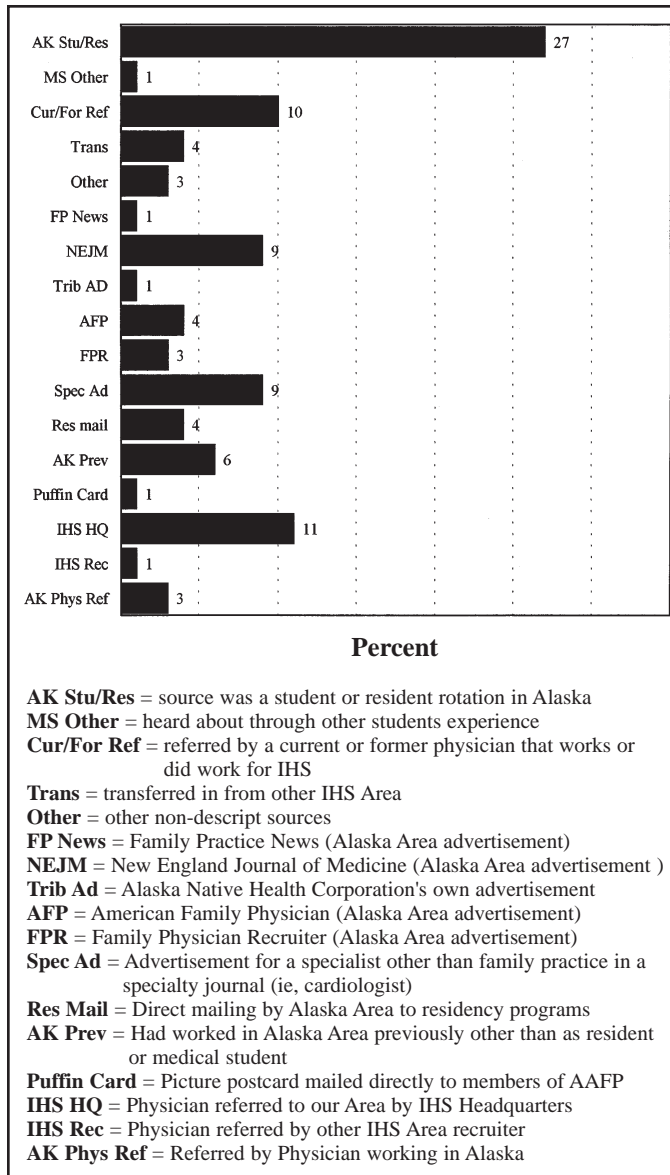
More currently-employed AANHS physicians had had a student-only experience with the AANHS (17%) than those who had had an AANHS residency-only experience (13%). In addition, more currently-employed AANHS physicians had student experience anywhere in the IHS system (35%) than those who had had residency experience anywhere in the IHS (30%). This suggests that student experiences may be as good a predictor for future employment as residency experiences.

More importantly, any student/resident experience with the AANHS (36%) appears to be a better predictor for current employment with AANHS than does other IHS student/resident experiences (17%).

After this study was completed, it was decided to explore the recruitment factors that influenced the employment of physicians in the AANHS over the last 2 years. Of the 70 physicians recruited into the Alaska Area between October 1994 and October 1996, 19 (27%) heard about the program through their medical student or resident experience within Alaska (Figure 3). This is larger than any other single advertising source used during the same period by AANHS. Data available from recruitment suggest, anecdotally, that some



**Figure 3. Sources for physicians hired, October 1994 through October 1996, N=70.**



physicians were referred by other physicians with student or resident experiences within the IHS.

While the information obtained in this survey does support the idea that student/resident experiences are important to recruitment, additional data are needed. In the future, we will try to gather data that will allow us to compare the retention of

those with and without any IHS training experience, to determine if physicians with an IHS training experience return to that site, and to compare the relative value of having students/residents to other workplace benefits. In addition, we plan to develop ways to more accurately assess the costs, risks, and benefits of having students and residents.

### Conclusions

Decisions about whether to have student and/or residency rotations should be made after considering all of the following as they impact the service unit/facility: quality and quantity of patient care, recruitment and retention issues, and budget.

Fifty-three percent of the respondents to our survey had had a student or residency rotation at an IHS or AANHS facility; an additional 14% with no IHS experience stated their employment was influenced by others who had had an IHS experience. Twenty-seven percent of the physicians hired by the AANHS over the last 2 years had had an AANHS student or residency rotation. It is clear from these data that these learning experiences do contribute to recruitment.

Respondents value medical students and residents for recruitment purposes and for their own professional growth. In addition, the residents contribute to patient care. However, previous customer surveys in the Alaska Area have indicated some concern about being "practiced on" by students.

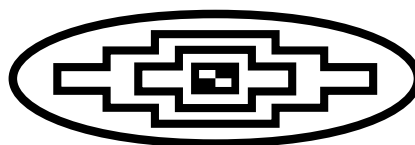
With tight budgets, the redesign of IHS, and an increase in local authorities and tribal management of health care programs, the fate of training opportunities for students and residents in all health professional categories lies with the ability of health professionals to garner support from the local administration and customers. As one respondent in our survey stated, "Any institution holding itself out as a "Center of Excellence" should also be involved with teaching."

It is assumed that any stimulus in a work environment that produces a higher quality and quantity of output is important to the "owners" of that workplace. Students and residents may be important to quality health care because their presence stimulates the health professional staff to perform at a higher level. However, in any customer driven organization, if the customer is uninformed, the customer may make decisions that may be contrary to his/her own interests.

Proving to customers/owners that the benefits of having students in the health care environment outweigh the costs and potential risk is the challenge for health professionals in the AANHS and IHS.

### Acknowledgments

The author is grateful to John Harvey, MD, and Sadie White, Medical Student Program Coordinator, for their technical assistance, encouragement, and suggestions. □



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# The Chemical Dependency Management Information System (CDMIS)

## A Six-Month Follow-up of Adult Inpatient Treatment in the Billings Area

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### Introduction

During 1994 and 1995, seven Indian reservation chemical dependency programs in the Indian Health Service Billings Area\* participated in collecting follow-up information on adults referred from their community chemical dependency programs to inpatient chemical dependency units. The purposes of this project were (1) to obtain utilization and outcome data on adults in the Billings Area who were referred and admitted to, treated by, and discharged from an inpatient program; and (2) to evaluate the usefulness of the Chemical Dependency Management Information System (CDMIS) as an effective, automated management information tool for obtaining outcome data. Before discussing the results of this study, a brief historical review of CDMIS and its predecessor, the Alcohol Treatment Guidance System (ATGS), will be presented.

### Background

The transfer of all American Indian and Alaska Native alcoholism and substance abuse programs from the National Institutes of Health, National Institute of Alcohol Abuse and Alcoholism (NIAAA) to the Indian Health Service (IHS) began in 1978 and was completed in 1983.<sup>1</sup> In the original memorandum of agreement between the two Agencies, the IHS was to research and develop a data system that monitored and evaluated prevention, treatment, staffing, and outcome activities of these transferred programs.<sup>1</sup>

The development of this data system took approximately two years, resulting in the creation of the Alcohol Treatment

Guidance System (ATGS).<sup>2</sup> Implementation of the ATGS began in 1981.

The ATGS was designed as a system to guide the process of treatment and to provide program accountability by having providers document clinical client services along with non-clinical staff activities. Forms needed to document ongoing clinical notes, treatment planning, and case management were provided as part of the ATGS. Programs were required to use the ATGS forms created for this system. The ATGS served to guide providers through the treatment process for clients. Local programs were expected to complete and submit service and activity data forms at the end of each month to the Area office and IHS Headquarters. Submitted ATGS forms were then forwarded to a contractor for data entry.

Over the years, this process was found to have a number of limitations that substantially diminished the usefulness of the program and hampered tribal and IHS substance abuse prevention planning efforts. The system's cost and susceptibility to confidentiality breaches were two key limiting factors. Another major weakness of the system was the processing of reports. A period of months would often go by before the reports were returned to the Area. In addition, if these reports required corrections many more months passed by before the final reports were returned. A fourth drawback of this process was that information collected by the ATGS was not entered into the individual medical record for inclusion on the Health Summary, as are PCC data.

Evaluation reviews of the IHS Alcoholism and Substance Abuse Program Branch by the Department of Health and Human Services Office of the Inspector General (OIG) recommended the development of an updated management information system that would provide data on alcohol and substance abuse treatment and eliminate the limitations of the ATGS.<sup>3-5</sup> Consequently, the Chemical Dependency Management Information System (CDMIS) was developed by the IHS Alcohol Substance Abuse Program Branch by March 1992. This automated computer package assists alcoholism and substance abuse programs in tracking client services from their initial admission intake interview through a period of up to two years post discharge. This system tracks crisis/brief interventions, and makes inquiries to programs for information, referrals, and prevention activities. CDMIS also tracks

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\* The Indian Health Service is comprised of 12 regional administrative units called Area Offices. The Billings Area Office covers the states of Montana and Wyoming.

overall staff qualifications, program disposition, and funding sources. This information system captures workload and client information.

Beta testing of the CDMIS was done by the Billings Area during the remainder of 1992. The official release date of CDMIS (Version 3)<sup>6</sup> was March 1993. By the time this third version was released to other IHS Areas, all reservation programs in the Billings Area were using the CDMIS and entering data accordingly. Currently all 12 IHS Areas are either using the CDMIS or importing CDMIS-specific data items from other management information system (MIS) software packages into the IHS Alcohol and Substance Abuse Program Branch database located in Albuquerque, New Mexico.

### Method

CDMIS core data routinely collected at initial intake and follow-up (in the Billings Area) were analyzed for a period of 6 months after discharge (CDMIS has the ability to run 6, 12, 18, and 24 month follow-up reports on clients who have been previously treated and discharged). Follow-up was done by the reservation chemical dependency program staff, using the CDMIS follow-up form (Figure 1). No data were requested or collected other than those recorded on this form. Permission was obtained from each tribe for the Area CDMIS Coordinator

**Figure 1. Chemical Dependency Management Information System (CDMIS) form.**

Program: _____		
Date client was seen: _____		
ComponentCode: _____	Target Code: _____	
Type of Action: _____		
Provider: _____		
Follow-up Months: 6 12 18 24 (Circle one)		
Client: _____		
Last	First	MI
Date of Birth: _____		
Primary Problem: _____		
Secondary Problem: _____		
Client in Treatment:	Yes _____	
	No _____	
	Unknown _____	
	Deceased _____	
Moved/Unable to locate _____		
Days Used Alcohol Last 6 Months: _____		
Days Used Drugs Last 6 Months: _____		
Drug Type: (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)		
(20) (99) <i>Please Circle the Appropriate Drugs</i>		
Days Hospitalized the Last 6 months: _____		
No. Alcohol/Drug-Related Arrests Last 6 Months: _____		
Client's Stage:	Alc/Sub: _____	Social: _____
	Physical: _____	Cul/Spiritual: _____
	Emotional: _____	Behavioral: _____

to access the follow-up data for the purpose of this project. Data obtained from printing standard CDMIS reports were then entered into the Epi Info software package,<sup>7</sup> an application routinely used and distributed by the Centers for Disease Control and Prevention (CDC).

All adult clients included in this evaluation were referred to inpatient chemical dependency treatment during fiscal years (FY) 1993 and 1994.

All information collected was "self-reported." Clients were questioned by chemical dependency counselors during the initial intake interview and 6 months following inpatient treatment to determine the "number of alcohol/drug-related arrests" and "days hospitalized" they had experienced in the last 6 months. Arrest information was limited to those related to alcohol/drug incidents, but the number of hospitalizations included all admissions to the hospital for any reason. Days of alcohol or drug use during the previous 6 months was also assessed. Abstinence status post-treatment is reported using this information. Changes in these measures of health status and social function from pretreatment to the posttreatment period were used as a rough assessment of treatment outcome.

Part of the client interview is to assess physical, emotional, social, cultural/spiritual, and behavioral function using a staging model developed by the IHS Alcohol and Substance Abuse Program Branch (Figure 2). The patient's condition in each of these areas is reported by stage number, and an average of the six numbers results in a "mean stage" number. The higher the average the better the patient is considered to be doing. Changes in this staging may indicate improving or worsening chemical dependency problems, independent of abstinence status.

### Results

In the Billings Area, during FY 1993 and FY 1994, there were a total of 541 patients in the database; 60% were male and 40% were female. Omission of data on the initial or follow-up reports submitted by the alcohol counselor into the CDMIS database resulted in calculations with differing numbers of patients in each of the tables that will be presented. Referrals from urban programs were not included due to incomplete implementation of CDMIS there at the time of this study.

Only patients whose initial and follow-up CDMIS forms were complete were included in the calculations for Table 1, which shows the age distribution of 480 (89%, or 480/541) adults according to primary substance of abuse: alcohol or other drugs. The age distribution of patients referred for drug treatment appears to be slightly younger than that for patients referred for alcohol treatment (Table 1).

The primary (principal) problem most frequently reported by adults at initial intake into a treatment program was alcohol dependence (Table 2), which accounted for approximately 73% of all admissions. Problems with both alcohol and drugs other than tobacco accounted for approximately 17% of all admissions. Tobacco use was reported as a secondary problem in 7% of the patients.

**Figure 2. Chemical Dependency Management Information System (CDMIS) staging tool.**

Factor	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
<b>Alcohol/ substance</b>	Withdrawal symptoms.	Reported compulsive drinking or drug use.	Preoccupation or daily drinking, or frequent binges or denial.	Some alcohol- or drug-related problem building up to abuse.	Plans to maintain sobriety, still needs support.	Commitment to long term sobriety, sober for 30 days or more, still needs support.
<b>Physical</b>	Acute or threatening conditions.	Needs additional care with health problem(s).	Getting medical attention or medical problem under control or no known medical problem.	Sleeps well, controls diet, needs plan for physical activity.	Maintains good health practices, including regular exercise. Still needs support.	Sees results of good health practices for 30 days or more.
<b>Emotional</b>	Feels worthless, situation is hopeless, possible suicide, w/alcohol and/or substance abuse.	Negative attitude, depression, anxiety or anger, w/alcohol and/or substance abuse.	Accepts responsibility for emotions and sees need to explore alternatives.	Deals with most situations successfully with support.	Self-confident, deals with emotions successfully for 30 days.	Positive self-image, effective problem-solving for 30 days or more.
<b>Social</b>	No social support and no friends.	Associates w/others only to use or talk about alcohol and drugs.	Aware of conflicts and need for change in lifestyle.	Belongs to network of non-drinking and non-using friends.	Friends and activities improving the quality of life, still needs support.	Network of friends and activities have been fulfilling for 30 days or more.
<b>Cultural/ Spiritual</b>	Denial that beliefs can have a positive influence on life.	Confusion or conflicts about belief system.	Able to discuss belief systems, aware that beliefs can have a positive influence on life.	Aware that beliefs can have a positive influence on life.	Beliefs contributing to all life areas.	Practicing beliefs consistently for 30 days or more.
<b>Behavioral</b>	Acute or life threatening behavioral problems.	Major behavioral problem w/home, school, work, or community.	Starting to accept responsibility for negative social behavior.	Practices reducing negative behavioral situations.	Maintaining positive behavioral control with support.	Positive self image, acceptable social behavior for 30 days or more.

**Table 1. Age distribution by type of drug problem of adult patients referred to inpatient chemical dependency treatment in the Billings Area Indian Health Service during FY 1993-1994, n=480.**

	<u>Alcohol</u>	<u>Other Drugs</u>
15-20 years of age	7 (2%)	6 (5%)
20-25 years of age	51 (14%)	27 (21%)
25-35 years of age	166 (47%)	55 (43%)
35-45 years of age	102 (29%)	34 (27%)
Over 45 years of age	26 (7%)	6 (5%)
Total	352	128

**Table 2. Primary (principal) problem of adults at initial intake into an inpatient chemical dependency treatment program, n=509.**

<u>Primary problem</u>	<u>Cases</u>
Alcohol	374 (73%)
Drugs or substances	13 (3%)
Inhalants	4 (1%)
Alcohol and drugs	56 (11%)
Alcohol, drugs, and inhalants	3 (1%)
Sobriety maintenance	6 (1%)
Alcohol and tobacco	12 (2%)
Alcohol, drugs, and tobacco	24 (5%)
Other	17 (3%)



The number of days hospitalized in the 6 months prior to and 6 months following treatment was unchanged for 75% of clients (Table 3). Seventeen percent spent fewer days in the hospital in the 6 months following treatment.

The number of alcohol/drug-related arrests after treatment appeared to decrease markedly (Table 4). Of the 455 patients whose records contained this information, 49% reported fewer arrests following treatment.

Fifty percent of the 451 patients who had their alcohol and drug use reported on their 6 month follow-up visit reported no alcohol or drug use following treatment (Table 5), 8% reported less than 10 days of use, and 42% reported more than 10 days of use following treatment.

Table 6 reports the patients' changes in mean functional stage from the initial intake visit to the follow-up contact and/or visit. Four-hundred fifty-six adult patients had a mean

functional stage recorded both at the initial intake visit and at the 6 months follow-up visit. Of these, 177 (39%) had no change in mean functional stage, 23% showed improvement, and 10% had a decline in function on follow-up.

## Discussion

The reported abstinence rates in this evaluation are consistent with chemical dependency outcome studies using research methodology.<sup>8-16</sup>

Because it is common for individuals who abuse alcohol to also be addicted to smoking, it is of interest how infrequently (7%) tobacco use was reported as a secondary problem (Table 2). It is unknown why this figure was so low; perhaps the word "problem" is perceived in a variety of ways.

Since chemical dependency is a chronic illness, it is anticipated that some of the clients abstinent during the 6-month follow-up period studied will relapse in the future. Nevertheless, this evaluation supports the notion that chemical dependency treatment can help people stabilize their lives and maintain abstinence after treatment. The collateral measures of health available in the CDMIS database further support the improvement in well-being and function after chemical dependency treatment.

Several advantages of using the CDMIS information for such Area-wide reports are evident. First, the system is already in place to meet administrative needs and staff members are already trained in its use, thus making the cost of such a report much less than that of developing and implementing a special research activity. Secondly, the scrutiny of data may encourage the improvement of overall data quality, as providers recognize the value of this information. Thirdly, combining data from several small programs with similar environmental and client characteristics may identify patterns or trends that would not be evident to the local program management and staff using

**Table 3. Change in number of days hospitalized from the 6 month period before to the 6 month period after treatment for adults sent to inpatient chemical dependency treatment, FY 1993-1994, n=451.**

<b>Change in Number of Hospital Days</b>	<b>Cases</b>
Fewer hospital days	78 (17%)
Unchanged	338 (75%)
More hospital days	35 (8%)

**Table 4. Change in number of arrests from 6 month period before to 6 month period after adult inpatient chemical dependency treatment, n=455.**

<b>Change in Number of Arrests</b>	<b>Cases</b>
Fewer arrests	222 (49%)
No change	194 (43%)
More arrests	39 (9%)

**Table 5. Self-reported abstinence rates of adults 6 months following inpatient treatment, 1993-1994, n=451.**

<b>Abstinence Status</b>	<b>Cases</b>
No alcohol or drug use	225 (50%)
Fewer than 10 days of alcohol or drug use	38 (8%)
More than 10 days of alcohol or drug use	188 (42%)

**Table 6. Change in mean functional stage of adults from the 6 month period before to the 6 month period following inpatient chemical dependency treatment, FY 1993-1994, n=456.**

<b>Change in Mean Functional Stage</b>	<b>Cases</b>
Four stage improvement	21 (5%)
Three stage improvement	44 (10%)
Two stage improvement	59 (13%)
One Stage Improvement	107 (23%)
No improvement	177 (39%)
One stage decline	29 (6%)
Two stage decline	12 (3%)
Three stage decline	6 (1%)
Four stage decline	0 (0%)
Five stage decline	1 (0%)

only their own data. Finally, combining data from several small programs also allows outcome assessment without the risk of violating our obligations to client confidentiality.

Disadvantages of CDMIS data for outcome reporting also were evident from this evaluation project. First, the reliability of self-report of use of alcohol or other drugs has been questioned. One review of the literature,<sup>17</sup> however, has shown that the method is relatively accurate under appropriate conditions. Second, the CDMIS system is not designed for outcome reporting, in that pooling data and analysis require transferring data to another software package (e.g., Epi Info). A third disadvantage is that it is hard to calculate precise follow-up dates because CDMIS data do not include the date of completion of inpatient treatment. Lastly, the data elements included in the CDMIS database clearly omit a number of items that would be useful to any outcome reports. For example, information that can be obtained when using standardized chemical dependency assessment tools is not available, co-morbid conditions are not identified, and a basic description of inpatient treatment activities is not included (length of stay, concomitant medical treatment, detoxification, etc.). In order to use this system to measure the outcome of various treatment modalities or sites, data that are sufficient to adjust for severity of illness would be needed.

This project pointed out the need to include the following additional areas for evaluation in future follow-up activities: treatment outcomes for adolescents, and outcomes for clients referred to the reservation intensive outpatient (IOP) and the outpatient programs.

Despite the limitations of this evaluation, the assessment of utilization of inpatient care and outcomes for adult clients receiving inpatient treatment for chemical dependency in the Billings Area has been greatly enhanced by the use of data available in the CDMIS system.

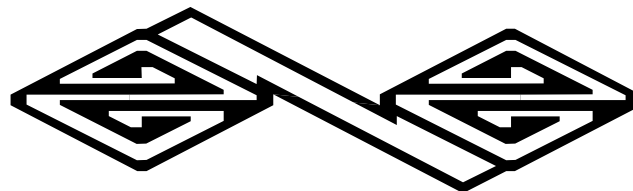
### Acknowledgements

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## **SPONSORSHIP OF PHARMACY CONTINUING EDUCATION** □

The redesign of the Indian Health Service (IHS) has necessitated that the pharmacy program at the IHS Clinical Support Center take on additional duties. This has required changes in the sponsorship policy for continuing education (CE) activities for pharmacists.

The IHS Clinical Support Center (CSC) is accredited by the American Council on Pharmaceutical Education (ACPE) as a provider of continuing education for pharmacists. As such, the CSC has worked with IHS and tribal facilities to sponsor local continuing education activities for continuing education (CE) credits for pharmacists. In addition, the CSC has been intimately involved in the planning and coordination of larger, regional or national training programs directed at pharmacists.

The CSC will no longer be able to sponsor activities for pharmacy CE credit that are coordinated primarily outside of this office (e.g., at service units or tribal facilities). The CSC will, however, continue to sponsor the IHS Pharmacy Practice

Training Program and the Southwest Regional Pharmacy Continuing Education Seminar, as well as programs developed in cooperation with Area Pharmacy Officers. The goal is to focus our energy on sponsoring activities that impact greater numbers of IHS and tribal health program pharmacists in order to create administrative time for the newly acquired pharmacist recruitment duties.

There will be no change in the CSC's sponsorship of continuing education for physicians and nurses. The CSC is nationally accredited as a provider of continuing education by the American Nurses Credentialing Center Commission on Accreditation and the Accreditation Council for Continuing Medical Education.

For more information about the changes in the pharmacy CE program or how to obtain CE sponsorship for physicians and nurses, contact the IHS Clinical Support Center, 1616 East Indian School Road, Suite 375, Phoenix, AZ 85016 (phone: 602-640-2140; fax: 602-640-2138).

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## **MEETINGS OF INTEREST** □

### **IHS Advanced Colposcopy Course and Refresher Workshop May 8-9, 1997 Albuquerque, NM**

The Indian Health Service Cancer Prevention and Control Program will offer a colposcopy course to both experienced and entry level colposcopists working in IHS or tribal facilities. The curriculum will include current concepts in lower genital tract disease; a review of cervical lesion identification and grading; colposcopy of the vulva and vagina; management of vulvar, vaginal, and cervical intraepithelial neoplasia; current concepts in HPV management; and new technologies for the future. The format will include both lectures and small group discussions of case studies with slides.

Interested providers should contact Roberta Paisano, MPH, IHS Cancer Prevention and Control Program, 5300 Homestead Road N.E., Albuquerque, NM 87110 (phone: 505-248-4132).

### **Mid-Level Primary Care Providers June 3-6, 1997 Scottsdale, AZ**

This continuing education conference for mid-level providers (nurse practitioners, nurse midwives, physician assistants, and pharmacist practitioners) employed by the Indian Health Service (IHS) or the tribes is designed to meet the learning needs of those providing primary care to American Indians and Alaska Natives. An agenda will be available in spring 1997. For additional information, contact the IHS Clinical Support Center, 1616 East Indian School Road, Suite 375, Phoenix, AZ 85016 (phone: 602-640-2140; fax: 602-640-2138).

### **ESRD for the Primary IHS Provider September 10-12, 1997 Albuquerque, NM**

This three-day course is designed for Indian Health Service- (IHS) and tribally-employed physicians who wish to become more actively involved in improving the care of patients with progressive renal disease and ESRD (end-stage renal disease). Participants will learn how to: (1) optimize the conservative management of patients with early kidney disease; (2) facilitate early orientation to renal replacement therapy for improved patient education, better informed treatment modality choice, and to reduce the need for emergent initiation of dialysis; (3) provide care to hemodialysis, peritoneal dialysis, and transplant patients which complements the care provided by the consulting nephrologist, (4) assist tribes in their efforts to establish or improve reservation-based dialysis facilities.

This meeting will be sponsored by the IHS Kidney Disease Program, the IHS Diabetes Program, and the National Kidney Foundation of New Mexico. There will be no tuition charge but the number of participants may be limited. If you are interested in this course, please contact Andrew S. Narva, MD, IHS Nephrology Consultant, PHS Indian Hospital, 801 Vassar Drive, NE, Albuquerque, NM 87106 (phone: 505-256-4018; fax: 505-256-4088; e-mail: anarva@smtpl.ihs.gov).

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