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Is There a Way . . .?

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After becoming familiar with the new functions added to our Microsoft Access® (Microsoft Access is a registered trademark of Microsoft Corporation in the US and other countries) Coumadin Clinic Database, described in an article published in the October 2011 *IHS Provider* entitled "Help! I can't get this to work!", questions soon came that started off

with, "Is there a way . . .?" These questions indicated that as users became familiar the database and its functions, they were identifying areas of improvement. These improvements included changes to existing functions, as well as new functions that could potentially be added. An example of an existing function that required improvement was the appointment function that was built in. Occasionally there was the need to "double book" an appointment slot, so this ability was added. It did not take long for the "double booking" to result in a problem. Appointment slots were not only being "double booked," but were inadvertently being "triple booked," and sometimes even "quadruple booked" (Figure 1). Patients and providers were not happy with this situation. The appointment function needed to be made into an interactive calendar. There needed to be a set number of appointments with the ability to see which days and times were already taken and which were still available.

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Figure 1. The original calendar used at Northern Navajo Medical Center, designed from the previous calendar on a spreadsheet. Here there are three regular appointments booked at 0920, and therefore the column for regular appointments is two lines longer than for the double book.

8/19/2011 Friday		Chart		Kept		Double book		Chart		Kept	
Time:	Name:	Number	RPMS		Comment:	Time:	Name:	Number	RPMS		Comment:
0820			•	•		0820			•	•	
0840			•	•	resch from 7/22	0840					
0900			•	✓		0900					
0920			✓	✓		0920					
0920			•	•		0940					
0920			✓	•		1000					
0940			•	✓	Rescheduled fro	1020					
1000			•			1040					
1020			•			1100					
1040			•	•		1120					
1100			•	✓		1140					
1120						1300					
1140			•	✓		1320					
1300			•	✓		1340			•	•	
1320			•	•		1400					
1340						1420					
1400			•		Previous 9.2 IN	1440					
1420						1500					
1440			•	•		1520					
1500			•	•		1540					
1520			•	✓							
1540			•								

The level of function needed could not be achieved using the existing forms and subforms. However, the functionality needed could be obtained using Microsoft Visual Basic® (Microsoft Visual Basic for Applications is a registered trademark of Microsoft Corporation in the US) for Applications for Access® and Structured Query Language (SQL). A specialized online training was located, evaluated, and utilized to accomplish a solution to this challenge.² This online seminar demonstrated how to build a monthly calendar that would display all appointments inputted as well as how to input appointments from the calendar itself. The important parts utilized from this seminar were the use of the "list-box," Visual Basic®, and SQL.

The List-Box

The list-box was designed for displaying a list of choices to be selected. The default size is one line high but it can be sized to show all of the choices. In the appointment calendar, this means all the appointments for that date.

The clinic is open on Wednesdays and Fridays, so a copy of the monthly calendar, which had a list box for each day of the month, was made, and everything but the first Wednesday and Friday were removed (Figure 2). Those two days were then copied to be used for the double-booked appointments. The list-boxes for the appointments were then resized to show all of the appointments for the day without scrolling.

Figure 2. The Wednesday and Friday view of the new Calendar.

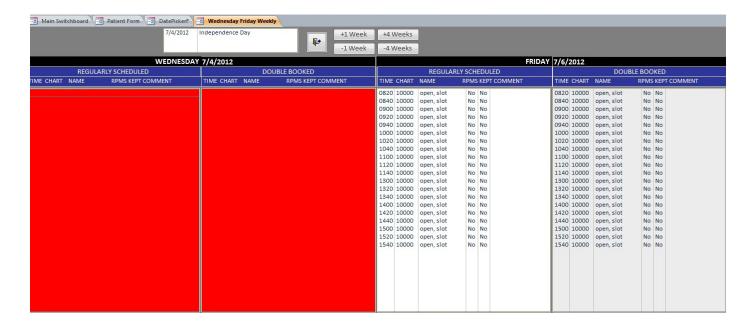
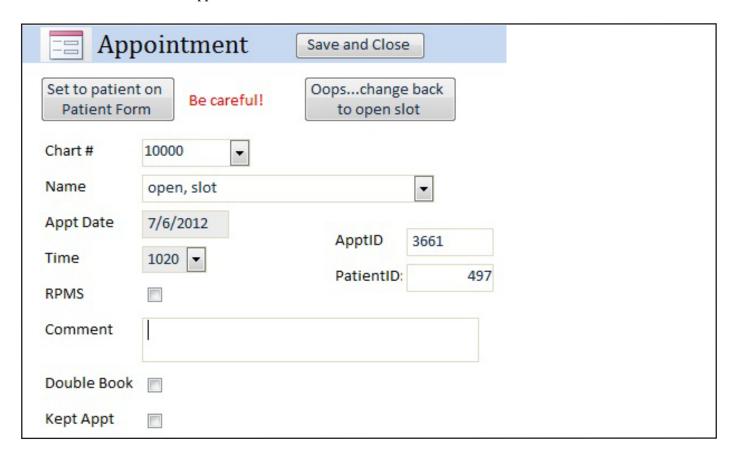


Figure 3. The Appointment Pop-Up form. Typing the chart number into the chart number field will set the appointment for the patient. If the main patient form is open to the correct patient, the "Set to patient on Patient Form" button will use Visual Basic® code to set the appointment.



Microsoft Visual Basic® for Applications

Microsoft Visual Basic® for Applications provides for clicking the choice/appointment to bring up a pop-up of the appointment. It not only brings up the pop-up form, it is also programmed to select specifically for the date and time slot clicked in the list-box (Figure 3).

After the provider selects a starting date, Visual Basic® opens the calendar to that date. It then operates the navigation buttons to change the days displayed in the calendar. It also indicates holidays by coloring those days red, and deleting the time slots, to prevent bookings on those days (Figure 2). Another list-box at the top of the calendar lists which holiday is being displayed. Additional closed days can be listed as well, such as for training or clinic construction/remodeling, if such days are needed.

Structured Query Language (SQL) Code

SQL codes provide for both the display and use of data from other fields from other tables in that field. Here it is used to display that patient's name and chart number instead of the primary key, or PatientID in our system, which is a unique identifying number. The PatientID field is copied and the SQL code placed in the area of the Properties Sheet called, "Row Source" to display the other information. For the appointment pop-up, the primary key was copied twice, once for the chart number, and once for the patient's name.

To prevent overbooking, a structure of "open, slots" for all possible appointment choices was created for each day and each time slot (Figure 2). Any rescheduling of an appointment generated two changes: the setting of the new appointment followed by the removal of the previous appointment by resetting it back to the "open, slot" holder.

The use of Access® in our Coumadin Clinic has been significantly enhanced with the creative use of the list-box, the use of the SQL code on copied primary key fields, and the use of Visual Basic® code. The appointment calendar has eliminated multiple bookings beyond the usual double-booking already planned, and has sped up the entry of the appointments.

Acknowledgement

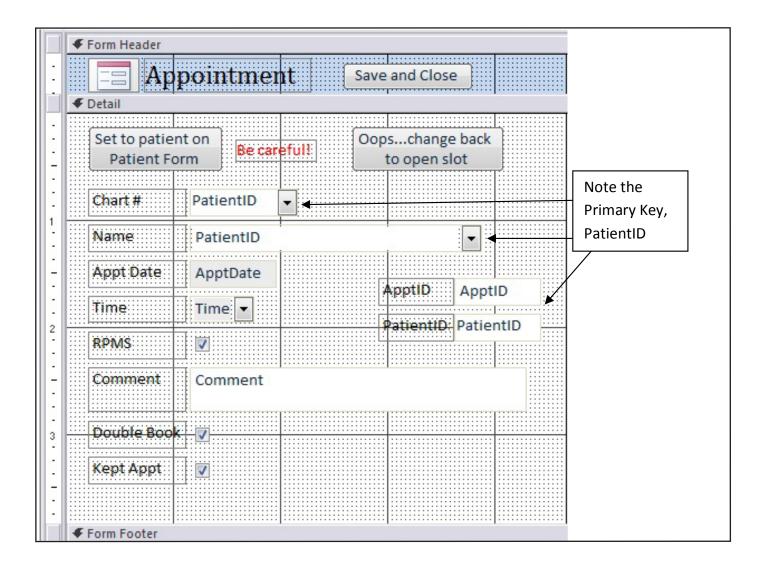
We are very grateful to Katherine Sims, MLIS, for her skillful editing of the prior article, "Help! I can't get this to work."

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Figure 4. Appointment Pop-Up form in Design View. Both the chart number and the patient name field are actually copies of the PatientID field converted to a combo box with SQL code in the Row Source to display the chart number and name.



Celebrating the Accomplishments of William Byler (August 24, 1931 – May 9, 2013)

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William Byler, a rising young scholar and public advocate, assumed the executive directorship of the Association on American Indian Affairs in 1963, after spending a year on Capitol Hill as staff director for Congressman Frank Kowalski of Connecticut. During the next 17 years, he moved the Association into what might well be described as its golden age, with successful advocacy on a wide range of matters of great importance to American Indians and Alaska Natives.

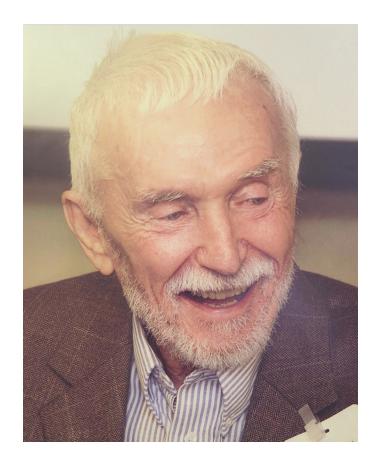
The Association, the largest Indian advocacy organization, with a membership of 30,000, had a long history of working for the improvement of Indian affairs including Indian health. For years, Dr. Walsh McDermott and later Dr. Carl Muschenheim, both professors at Cornell Medical School and powerhouses in the therapy of tuberculosis, headed a health committee for the organization. Their testimony on behalf of the Association played a major role in the transfer of the Indian Health Service from the Department of Interior to the Department of Health, Education and Welfare.

Byler was born in Chicago, IL and spent part of his childhood on a farm in Indiana, where he attended a one-room school. He once stated that he read all the books that were available in the school library. He received a BA degree from Yale College in 1955 and also attended graduate school at Yale University. This scholarly interest continued throughout his life.

As Executive Director of the Association, he spearheaded a number of important initiatives, including the Alaska Native Land Claims Settlement Act, the Havasupai amendment to the Grand Canyon Enlargement Act, the Indian Child Welfare Act, and legislation to settle land and water rights of several tribes including the Ak-Chin Indian Community, San Carlos Apache Tribe, Fallon Paiute and Shoshone Tribes, and others. However, in what may well be regarded as his crowning achievements, Bill played a leading role in securing passage of the Indian Self Determination and Education Assistant Act (PL 93-638) and the Indian Health Care improvement Act (PL 94-437).

In securing passage of these two revolutionary Acts, Byler teamed with Forrest Gerard, then on the staff of Senator Henry Jackson, and Emery Johnson, then Director of the Indian Health Service. Bill virtually commuted between New York City, the site of the Association, and Washington, DC in the years leading up to the passage of these acts. These three individuals formed a formidable team that drafted both pieces of legislation and pushed them through Congress. The impact of these two acts has been as profound as any other legislation for Indian people, and their effects continue today. Central to the effort was Bill, who worked tirelessly at several levels to secure their passage.

Even with the heavy responsibilities of securing passage of these and other important Indian legislation, Bill had time for a wide range of advocacy activities and support of Indian causes and efforts. An example of this was the awarding of a



small grant that was instrumental in the establishment of the Association of American Indian Physicians. His tenure with the Association was also marked by a strong movement to bring American Indians and Alaska Natives into leadership positions within the organization. Included in these were the late, great Northern Cheyenne leader, John Woodenlegs; John Echohawk, Pawnee, Executive Director of the Native American Rights Fund; and the late, great scholar, author, and advocate Dr. Alfonso Ortiz, a member of San Juan Pueblo, who became the first Indian president of the Association.

Bill remained a serious scholar throughout his life, often extemporaneously expounding on authorities such as Michel Foucault while discussing Indian water rights. In 1980, he left the Association to form a private Washington consulting firm, William Byler Associates, specializing in a wide range of Indian and tribal matters across the country. During this time

he continued his efforts to improve the health of Indian people and remained a strong friend of the Indian Health Service.

On May 9, 2013 Bill finally succumbed to the increasing effects of ill health. He leaves behind his wife, Mary Lou Gloyne Byler, a member of the Eastern Band of Cherokee Indians, and daughters Celia Byler O'Brien of Framingham, Massachusetts, and Helen C. Byler of West Haven, Connecticut.

It is safe to say that Bill directly touched the lives of every American Indian and Alaska Native through the results of his tireless efforts on their behalf. Not the least of these were enactment of PL 93-638 and PL 94-437. Given the extent of his enormous contributions, Bill Byler takes his place among the very few individuals distinguished by their successful efforts on behalf of American Indians and Alaska Natives. He deserves much greater recognition than has been accorded him.

Print Version of *The Provider*Has Ceased Publication

The federal government is always exploring ways to reduce costs. One recent initiative is an effort to reduce printing expenses. For this reason, we have stopped publishing and distributing the print edition of *The Provider*.

We will continue to publish the monthly electronic edition of our journal to the CSC website. Currently, about 900 individuals are subscribers to the listserv that notifies them when each monthly issue is posted, and lists the contents of

that issue. It is unknown how many readers simply access the website on a periodic basis without relying on the listserv for reminders that the monthly issue is available.

We encourage all our readers to subscribe to the listserv (go to http://www.ihs.gov/provider/index.cfm?module = listserv) so that you will receive monthly reminders about when the latest issue is posted to the website. This will also give us an improved count of the number of readers.

The Indian Health Service Clinical Support Center Has Been Resurveyed

The Indian Health Service Clinical Support Center has been resurveyed by the Accreditation Council for Continuing Medical Education (ACCME) and awarded accreditation with commendation for six years as a provider of continuing medical education for physicians.

ACCME accreditation seeks to assure the medical community and the public that the IHS Clinical Support Center provides physicians with relevant, effective, practice-based continuing medical education that supports US health care quality improvement.

The ACCME employs a rigorous,



multilevel process for evaluating institutions' continuing medical education programs according to the high accreditation standards adopted by all seven ACCME member organizations. These organizations of medicine in the US are the American Board of Medical Specialties, the American Hospital Association, the American Medical Association, the Association for Hospital Medical Education, the Association of American Medical Colleges, the Council of Medical Specialty Societies, and the Federation of State Medical Boards of the US, Inc.

Our Apologies

We apologize for the delay in the production of this issue. Constraints on funding at the end of the fiscal year made it impossible to complete the preparation of the issue until now. We will catch up with our usual monthly publishing schedule as soon as possible. We are currently accepting submissions for the October issue.

Hospital Utilization for Congestive Heart Failure

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Introduction

This study examined hospital utilization of congestive heart failure (CHF) as the first-listed diagnosis for American Indians and Alaska Natives (AI/AN) eligible for direct inpatient care services in one of the twelve Indian Health Service (IHS) geographic Areas in years 2007 - 2012.

Background

Congestive heart failure is a chronic medical condition that may require hospitalization for treatment. It is a common cause for hospitalizations in the US for adults 65 years of age and older due to the heart losing the ability to pump blood efficiently to the lungs and body as the body ages. Coronary heart disease, high blood pressure, and diabetes are the leading causes of CHF. In addition to the older age group, other high risk groups include those adults who are overweight, African Americans, males, or those having type 2 diabetes. However, CHF can be controlled with medication and lifestyle changes based on preventable risk factors.

In a recent American Heart Association (AHA) report, CHF is a chronic cardiovascular system disease with high prevalence, cost, morbidity, and mortality with an estimated twelve percent of both men and women 80 years and older having CHF.² The authors state that although hospitalization

rates have decreased in past years, the prevalence will continue to increase as the population ages if the current health care remains the same. Some of the metrics proposed by the AHA for reducing the prevalence of cardiovascular diseases include measuring the prevalence of CHF and measuring the recurrence of CHF hospitalizations.

The Agency for Healthcare Research and Quality (AHRQ) identified CHF as one of nine chronic ambulatory sensitive conditions (ASC) that can be used as a prevention quality indicator (PQI).3 An ASC can be used as a metric to track hospitalizations that may be potentially prevented if the patient receives efficient and effective medical care in the ambulatory setting. The assumptions are that use of PQIs for an ASC to assess the quality of health services in the community using readily available hospital administrative data can provide a window into the community that will help to identify unmet community health care needs, to monitor how well complications from a number of common conditions are being avoided in the outpatient setting to prevent hospitalization, and to compare performance of local health care systems across communities.3 Use of hospitalization rates may also provide an estimate of the disease prevalence.4

Statistics

As shown in Table 1, Diseases of the Circulatory System (CSD) using ICD-9 Codes of 390-459, CHF ranked as the fifth most common hospitalization first-listed diagnosis for adults

Table 1. Rank in each fiscal year for CHF as the most common Ambulatory Care (AMB) problem or clinical impression, first listed Hospitalization admission diagnosis, and by Age groups

	Adults 20 year	s and older	Adults 65 years and older		
Year-Disease Group	e Rank for AMB Rank for Visits Hospitaliza		Rank for AMB Visits	Rank for Hospitalizations	
2007-CSD 7th		5th	2nd	2nd	
2012-CSD 4th		8th	2nd	3rd	
	Adults 20 years and older		Adults 65 years and older		
Year-Disease Group	Rank for AMB Visits	Rank for Hospitalizations	Rank for AMB Visits	Rank for Hospitalizations	
2007-CHF	2nd	1st	2nd	1st	
2012-CHF	5th	1st	4th	1st	

20 years and older eligible for care in this IHS Service Area AI/AN population in fiscal year 2007 (ICD9 Codes were taken from the International Classification of Diseases 9th Revision Clinical Modification 6th Edition for 2005).⁵ This ranking excluded hospitalizations due to pregnancy and a supplemental classification of V codes. Within the CSD codes, "Other Forms of Heart Disease" (ICD-9 codes 420-429) was the second most common first-listed hospitalization diagnosis. Of these codes, CHF was the leading diagnosis. For adults 65 years and older within this population, CSD was the second most common reason for a hospitalization. "Other Forms of Heart Disease" was the leading hospitalization diagnosis with CHF as the leading diagnosis within this ICD-9 group. In the same fiscal year 2007, CSD ranked as the seventh most common ambulatory care problem or clinical impression for an adult ambulatory visit. CHF was the second most common ambulatory care problem or clinical impression within the CSD group. For the 65 years and older age group, CSD was the second most common ambulatory care problem or clinical impression. CHF was the second most common ambulatory care problem or clinical impression in the 65 years and older age group within the CSD group.

In fiscal year 2012, Diseases of the Circulatory System (CSD) ranking dropped to eighth most common hospitalization diagnosis for adults 20 years and older eligible for care in this IHS Service Area AI/AN population. Within the CSD codes, "Other Forms of Heart Disease" was the leading hospitalization diagnosis. Of these, CHF remained the leading diagnosis. For adults 65 years and older within this population, CSD dropped to the third most common reason for a hospitalization. "Other Forms of Heart Disease" remained the leading hospitalization diagnosis with CHF as the leading diagnosis within this ICD group.

In fiscal year 2012, CSD increased to fourth most common ambulatory care problem or clinical impression for an adult ambulatory visit. CHF increased to the fifth most common ambulatory care problem or clinical impression for an adult ambulatory visit within the CSD group. CSD was the second most common ambulatory care problem or clinical impression in the 65 years and older age group for both males and females. CHF dropped to the fourth most common ambulatory care problem or clinical impression in the 65 years and older age group for both males and females.

Fiscal year 2007 data are based on this IHS Service Area AI/AN population obtained from the National Patient Information Reporting System (NPIRS) National Data Warehouse (NDW) Annual Direct Inpatient listing (BINPSUM) with run date 11/21/2007 between 10/01/2006-09/30/2007, the Inpatient Report 2 C dated 11/26/2007, and the Annual Report 1 C dated 09/18/2009. Fiscal year 2012 data were obtained from the NDW BINPSUM with run date 11/16/2012 between 10/01/2011-09/30/2012, the Inpatient Report 2 C dated 11/28/2012, and the Annual Report 1 C dated 11/28/2012. NPIRS is the national data repository for IHS

statistical health care data. The NDW contains data on patient registration and visit encounters occurring at either IHS facilities or contracting facilities that provide care for members of federally recognized tribes that access IHS services.

Study Objectives

This study provides estimates of the current CHF hospitalization rates in an IHS Service Area based on the following four questions:

- 1. Did the number and age distribution of patients hospitalized for CHF change from 2007 to 2012?
- 2. Did the rates of hospitalization for CHF change from 2007 to 2012?
- 3. Did trends in CHF hospitalization rates differ for males and females from 2007 to 2012?
- 4. Were the changes in the rate of CHF hospitalization the same for males and females and the age group over 65 years?

These four questions examine CHF hospital utilization and were replicated from the recently published data brief on hospitalizations for congestive heart failure in the US, 2000 – 2010.6 The brief was based on a national probability sample survey using adminstrative data for discharges from nonfederal, short-stay hospitals taken from the National Hospital Discharge Survey for the years 2000 and 2010.

Establishing baseline CHF hospitalization data may help local IHS service Area health care facility leaders assess the effectiveness of current CHF care provided to patients, to identify potential health care problem areas, to identify unmet community health care needs, to monitor how well complications from known CHF risk factors are being avoided in the outpatient setting to prevent a CHF hospitalization, and to compare performance of local health care systems across IHS communities.³ In addition, establishment of baseline data will help with estimating the disease prevalence and with measuring improvements in the efficiency of CHF health care provided in the ambulatory care setting for preventing future CHF hospitalizations.⁴

Methods

This IHS service Area provides direct and ambulatory health care services to approximately 125,000 Native Americans living in one of the nineteen service units. By definition, a service unit is an administrative entity that is responsible for planning, managing, and evaluating the IHS program within a defined geographic area, and includes only land within a Health Service Delivery Area (HSDA).⁷ Currently there are seven IHS hospitals providing inpatient services to this population within this Area. The study population were AI/AN adults age 19 years and older eligible for direct inpatient care services in six of the IHS hospitals. One was excluded due to being closed to direct admssions. The hospitalizations were those with a first listed diagnosis coded

within the Circulatory System Disease (CSD) ICD-9 classification grouping in the years 2007 through 2012. Within that population, the final study group were those with the ICD-9 code for congestive heart failure (CHF) as the first listed hospital diagnosis: 428.0-482.4. The diagnoses used in the study were based on ICD-9 Codes. The study design was quantitative and observational using a retrospective review of available administrative secondary data for CSD hospitalizations during the six fiscal years, beginning October 1, 2007 through September 30, 2012.

Data sources

The data were aggregated and de-identified and obtained from the NDW BINPSUM reports for six fiscal years 2007 through 2012. Data were verified using NDW rates from NPIRS. This systematic study has limited generalizablilty due to using only AI/AN hospital utilization in IHS hospitals providing direct care located in this one service Area. The study had no interaction nor intervention with human subjects and was reviewed and approved by the local service Area IHS Institutional Review Board.

Rate Calculations

Calculations included hospitalization rates based on frequency and percentage distributions, and hospitalization rates that were age-adjusted and gender age-adjusted rates based on the Indian Active User Population for each year. IHS defines the Indian Active User Population as the number of Indian registrants residing within a service delivery area that had at least one face-to-face, direct or contract, inpatient stay, ambulatory care visit, or dental visit during the prior three fiscal years. The IHS fiscal year begins October 1 and ends September 30.

The estimated rates were based on age groups for adults 19 years and older using two age groups: under the age of 65 years and those 65 years and older. Rate calculations were based on hospitalizations by the two age groups and gender for each year. The 65 years and older age group was further stratified into three additional age groups: 65 - 74 years, 75 - 84 years, and 85 years and older. Age-adjusted rates were calculated based on the number of hospitalizations, sex, and age group using the 2007 and 2012 three-year Indian Active User Population as the population.

The population data used as the standard were obtained on May 21, 2013 from the Senior Statistician in the Division of Patient Care Statistics for the Indian Health Service. These data were based on the estimated AI/AN service population for this IHS service Area by age and sex for year 2011 for the specified age groups, the 2012 population projections updated in 2012 for boundary changes, and the 2010 census population prepared by the National Center of Health Statistics. For the crude rate, the numerator (n) was the number of Indian Active users per fiscal year. The denominator (d) was the number of hospitalizations per fiscal year. The rates (r) was then

calculated dividing (n) by (d) x 10,000, to give (r), i.e., the hospitalizations per 10,000 population. Next a weight was calcuated using age distribution based on the standard population (age rate divided by the total standard population). The age-adjusted rate was then calculated by multiplying the crude rate by the age distribution weight.

To determine statistical changes in the hospitalizations for data that were not normally distributed, two non-parametric tests, Kruskal Wallis H and Mann Whitney U tests, were used with a p value < 0.05 as the significance level (IBM SPSS software used for the data analysis). Descriptive statistics were used for number of cases, number of cases by gender, age groups, and fiscal year. Due to very small numbers, aggregate percentages are shown. Percent changes for the hospitalizations were calculated between the two years 2007 and 2012.

Results for the Questions

Did the number and age distribution of patients hospitalized for CHF change from 2007 to 2012?

There were an estimated 1,000 hospitalizations with Circulatory System Disease (CSD) as a first-listed diagnosis during six fiscal years beginning October 1, 2007 through September 30, 2012. Within this group, 35% were coded with ICD-9 codes of 428.0-428.4 for CHF as the first listed diagnosis. The number of CHF hospitalizations decreased 29% from 2007 to 2012.

Of the total hospitalizations during all six years, 18% had two or more repeat CHF admissions. Fifteen percent of the males had two or more CHF admissions and eighteen percent of the females had two or more admissions. For females the repeat admission rate increased 88% between 2007 to 2012 for the 65 years and younger age group and decreased 3% in the 65 years and older age group. For males, the repeat admission rate decreased 43% between 2007 and 2012 for the older age group. There were no male repeat admissions for the younger age group

In 2007, there were 33.6% CHF hospitalizations of the total CSD Hospitalizations, and this increased to 39.5% in year 2012. The minimum age in year 2007 was 22 years for the CHF hospitalizations, and the oldest age was 95 years. The mean age was 71.89 and the median age was 73. In year 2012, the minimum age increased to 38 years and the maximum age decreased to 91. The mean age increased to 74.89 and the median age increased to 77. Overall, the trend was an increase in the older age groups over 65 years between years with the largest increase for those in the age group 75 - 84 years.

Based on the rate of hospitalizations to the total hospitalizations in each of the two years 2007 and 2012, shown in Table 2, hospitalization rates for adults 65 years and older increased with a percent change of 22.5%. The age groups with the largest increase percent change were the age group 75 - 84 years at 63.9% followed by the age group 65 - 74 years at 17.9%. Although the age group 75 - 84 years had the largest

Table 2. Percent distribution of hospitalization frequency to total hospitalizations per year, by age group, and the percent change

Hospitalizations % Change between years							
	Fiscal Year						
Rate to total hospitalizations	2007	2012	% Change				
Adults Under 65 years	30.7%	15.1%	-50.8%				
65 years and older	69.3%	84.9%	22.5%				
65-74	24.0%	28.3%	17.9%				
75-84	25.3%	41.5%	63.9%				
85+	20.0%	15.1%	-24.5%				

change and the largest mean rank of 72.34, this was not statistically significant based on the chi-square values using a Kruskal Wallis H test grouping four age groups by the two years: H(df 3) = 6.236, p = .101, with a mean rank of 54.52 for age group 19 - 64 years, 67.09 for age group 65 - 74 years, 72.34 for age group 75 - 84 years, and 60.26 for age group 85 years and older.

The older age group (65 plus years) was more likely to be hospitalized than the younger age group (under 65 years) in 2012 compared to 2007. This was a statistically significant finding at the significance level of .05, based on a Mann Whitney U test. The two age groups were tested by the two years: U = 1678, p = .044. The mean rank was 70.34 for the older age group in 2012 and 60.37 in year 2007.

Did the rates of hospitalization for CHF change from 2007 to 2012?

Rates of hospitalization were calculated controlling for age based on the Indian Active User Population for each year and the 2011 Census population as the standard population. The age adjusted hospitalization rates decreased for the two age groups between 2007 and 2012 as shown in Table 3.

Did trends in CHF hospitalization rates differ for males and females from 2007 to 2012?

The average adult male hospitalization rate was 41% over the six years compared to 59% for females over the same time. Females had consistently higher rates over time (Figure 1). In year 2010, the rates converged at 50% for both groups. Female hospitalization rates decreased from 67% in year 2007 to 64% in year 2012. Rates were not statistically significantly different by gender across the six years.

Were the changes in the rate of CHF hospitalization the same for males and females and the age group over 65 years?

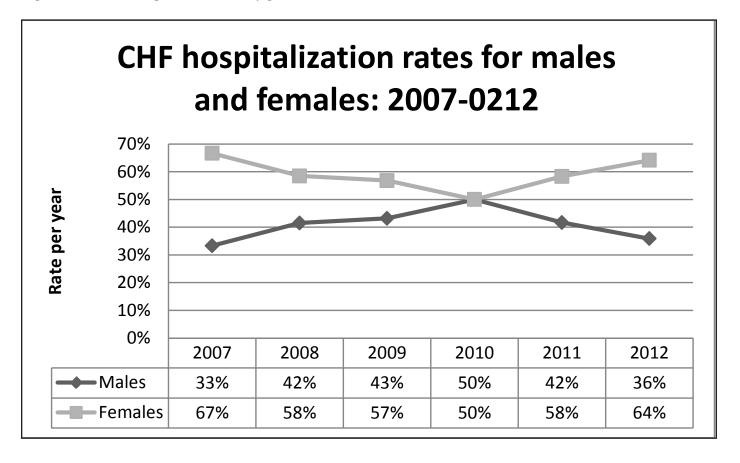
Based on the change between the two years, 2007 and 2012, female rates for the older age group 75 - 84 years were significant at the significance level of 0.05 using a Mann Whitney U test. The two age groups were tested by the two years: U = 637, p = .016. The mean rank was 48.76 for the older age group in 2012 and was 38.24 in year 2007.

The age adjusted rates also increased 29% for this group. There were no significant changes for the male rates, but the age group 65 - 74 had the highest rank for hospitalization rates in 2012 and the age adjusted hospitalization rates increased

Table 3. Age-adjusted hospitalization rates

Age-adjusted hospitalization rates per 10,000 population	2007	2012	% Change
Adults <65 years	3.2	1.0	-69%
Adults 65 years and older	6.4	4.8	-25%

Figure 1. Trend for hospitaliation rates by gender



24%. The age adjusted rates stratified into three older age groups for each gender are shown in Table 4.

Discussion

This summary provides data on the CHF hospital utilization by AI/AN eligible for direct inpatient care services in one IHS service Area in years 2007 - 2012. Overall, the IHS inpatient hospitalizations for all causes decreased 10.8% in 2012 compared to the past year. Reasons for the decline were not available. This limitation may underestimate the true number of CHF hospitalizations due to AI/AN clients who have the option to go to non-IHS hospitals for care. Data findings are not generalizable to other IHS service Area populations.

There were two key statistically significant findings for the rates of CHF hospitalizations. The older age group (65 plus years) were more likely to be hospitalized than the younger age group (under 65 years) in 2012 compared to 2007. Females in the 75 - 84 years age group had higher hospitalization rates in year 2012 compared to males.

There were two key non-statistically significant findings based on age and gender adjusted rates. Males in the 65 - 74 years age group had a 24% increase in hospitalizations rates in

year 2012 compared to males in year 2007. Females in the age group 75 - 84 years had a 29% increase in hospitalizations in year 2012 compared to females in the same age group in year 2007. The findings for the ICD-9 code rankings were not tested for significance. Ranking for the frequency of ambulatory care visits for the diagnosis code CHF decreased for all age groups between the two years. The ranking for the frequency of hospitalizations with the CHF code did not change between the two years.

Summary

Some CHF hospitalizations may be avoided if the medical care provided in the ambulatory setting is timely and appropriate.³ Although this IHS service Area direct care hospitalizations decreased overall, the rank for the diagnosis for the hospitalization remained the same for all age groups in these two years. In addition, ambulatory care visits with a CHF code decreased in rank for all age groups between the two fiscal years. Based on these two findings, there is a need for further investigation of potential health care quality problem areas for the ambulatory care provided to the older age groups within this specific AI/AN population.

Implications for practice are to assure continuous

Table 4. Gender and age-adjusted hospitalization rates for the three older age groups

Age-adjusted hospitalization rates per 10,000 population	2007	2012	% Change			
Male Population						
65-74 years	1.83	2.27	24%			
75-84 years	2.97	1.72	-42%			
85 and over	1.13	0.59	-47%			
Female Populat	ion					
65-74 years	4.32	2.32	-46%			
75-84 years	3.55	4.58	29%			
85 and over	2.91	1.48	-49%			

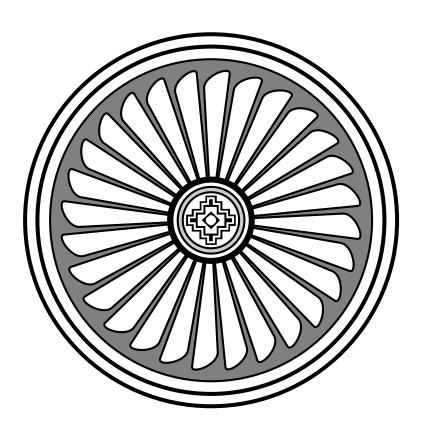
assessment of local Indian Health Service health care facility CHF hospitalization data, and to assure that evidence-based CHF measures of care are provided in the ambulatory setting, specifically targeting the older female clients. Targeted investigations using performance improvement methods may help to identify current unmet community health care needs for the older age group, to identify how well the older patient is able to access ambulatory care, to identify how well the older patent is able to understand and to comply with CHF-specific discharge care teaching, and to identify how well complications from CHF are being avoided in the outpatient setting to reduce potentially preventable CHF hospitalizations.⁶ Implications for Indian Health Service health care leaders are to support and promote improvement efforts within the ambulatory setting, with a goal of reducing CHF prevalence as this at-risk AI/AN population ages.

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MEETINGS OF INTEREST

Advancements in Diabetes Seminars Monthly; WebEx

Join us monthly for a series of one-hour WebEx seminars for health care program professionals who work with patients who have diabetes or are at risk for diabetes. Presented by experts in the field, these seminars will discuss what's new, update your knowledge and skills, and describe practical tools you can use to improve the care for people with diabetes. No registration is necessary. The accredited sponsors are the IHS Clinical Support Center and IHS Nutrition and Dietetics Training Program.

For information on upcoming seminars and/or previous seminars, including the recordings and handouts, click on this link and see Diabetes Seminar Resources: http://www.diabetes.ihs.gov/index.cfm?module=trainingSeminars

Available EHR Courses

EHR is the Indian Health Service's Electronic Health Record software that is based on the Resource and Patient Management System (RPMS) clinical information system. For more information about any of these courses described below, please visit the EHR website at http://www.ihs.gov/Cio/RPMS/index.cfm?module=Training&option=index.

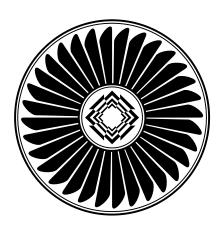
The Fourth Annual Alaska Native Health Research Conference

Anchorage, Alaska; March 27 - 28, 2014

The 4th Annual Alaska Native Health Research Conference (ANHRC), hosted by the Alaska Native Tribal Health Consortium Health Research Review Committee will be held at the Hotel Captain Cook, Anchorage, Alaska, on March 27 - 28, 2014. The objectives of the conference are to assemble 200 - 300 tribal leaders, health professionals, health organization directors, health educators, Alaskan students interested in health-related fields, and health researchers serving Alaska Native people statewide to build capacity for health research by Alaska tribal organizations and in Alaska Native communities and to promote tribal self-determination (Public Law 93-638, 1996) through development of Alaska Native health research professionals. Specific aims include 1) promoting community-based participatory research, cultural competence of research staff, and community confidence in research; 2) sharing advances in Alaska Native health research with tribal leaders, community members, and health research professionals internal and external to the Alaska Tribal Health System; and 3) demonstrating the positive impact of health research on the health status of Alaska Native people, thereby reinforcing the need for continued support of health research to minimize important health disparities. The 4th ANHRC provides a forum whereby researchers, at the request of Native leadership, will share basic information pertaining to epidemiologic surveillance and observational research, community intervention studies, and clinical randomized controlled trials. A substantial portion of this conference will focus on the multiple environmental health projects conducted in several rural communities statewide.

Please visit our website periodically for registration information and other updates on the conference as they are posted at https://www.signup4.net/public/ap.aspx?EID=20133021E&OID=50.

The website can also be easily accessed through a link on https://www.alaskatribalhealth.org/.



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 as attachments by e-mail to john.saari@ihs.gov. Please include an e-mail address in the item so that there is a contact for the announcement. If there is more than one position, please combine them into one announcement per location. Submissions will be run for four months and then will be dropped, without notification,, 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 (\$100 for four months). The Indian Health Service assumes no responsibility for the accuracy of the information in such announcements.

Family Physician with Obstetrical Skills Ethel Lund Medical Center; Juneau, Alaska

The SEARHC Ethel Lund Medical Center in Juneau, Alaska is searching for a full-time family physician with obstetrical skills to join a great medical staff of 14 providers at a unique clinic and hospital setting. Have the best of both worlds by joining our practice where we share hospitalist duties and spend our remaining time in an outpatient clinic with great staff and excellent quality of life. We have the opportunity to practice full spectrum family medicine with easy access to consultants when we need them. Maintain all your skills learned in residency and expand them further with support from our tertiary care center, the Alaska Native Medical Center.

Clinic is focused on the Patient Centered Medical Home, quality improvement with staff development from the Institute for Health Care Improvement, and using the Indian Health Service electronic medical record. Frequent CME and opportunities for growth, including teaching students and residents, and faculty status at University of Washington available to qualified staff. This is a loan repayment site for Indian Health Service and National Health Service Corps, and State of Alaska SHARP program.

Work in southeast Alaska with access to amazing winter and summer recreational activities. Live in the state capital with access to theater, concerts, annual musical festivals, and quick travel to other communities by ferry or plane. Consider joining our well-rounded medical staff at a beautiful clinic with excellent benefits. For more information contact, Dr. Cate Buley, Assistant Medical Director, Ethel Lund Medical Center, Juneau, Alaska by telephone at (907) 364-4485; e-mail cbuley@searhc.org. Position open 10/1/2013. Look us up online at www.searhc.org job vacancies. (8/13)

Family Medicine Physician Internal Medicine Physician Emergency Medicine Physician Sells Service Unit; Sells, Arizona

The Sells Service Unit (SSU) in southern Arizona is recruiting for board certified/board eligible emergency room physician, family/internal medicine physician, and physician assistants to join our experienced medical staff. The Sells Service Unit is the primary source of health care for approximately 24,000 people of the Tohono O'odham Nation. The service unit consists of a Joint Commission accredited 34bed hospital in Sells, Arizona and three health centers: San Xavier Health Center, located in Tucson, Arizona, the Santa Rosa Health Center, located in Santa Rosa, Arizona, and the San Simon Health Center located in San Simon, Arizona with a combined caseload of approximately 100,000 outpatient visits annually. Clinical services include family medicine, pediatrics, internal medicine, prenatal and women's health care, dental, optometry, ophthalmology, podiatry, physical therapy, nutrition and dietetics, social work services, and diabetes self-management education.

Sixty miles east of the Sells Hospital by paved highway lies Tucson, Arizona's second largest metropolitan area, and home to nearly 750,000. Tucson, or "The Old Pueblo," is one of the oldest continuously inhabited sites in North America, steeped in a rich heritage of Indian and Spanish influence. It affords all of southern Arizona's limitless entertainment, recreation, shopping, and cultural opportunities. The area is a favored tourist and retirement center, boasting sunbelt attributes and low humidity, with effortless access to Old Mexico, pine forests, snow sports, and endless sightseeing opportunities . . . all within a setting of natural splendor.

We offer competitive salary, relocation/recruitment/retention allowance, federal employment benefits package, CME leave and allowance, and loan repayment. For more information, please contact Peter Ziegler, MD, SSU Clinical Director at (520) 295-2481 or by e-mail at *peter.ziegler@ihs.gov*. (8/13)

Mid-Level Practitioner Health Director Outloom Tribes Le Bush Weshin

Quileute Tribe; La Push, Washington

The Quileute Tribe has a job opening for a full-time midlevel practitioner. Must be a certified physician assistant, licensed in the state of Washington, and must have a valid Washington driver's license. Submit your application, professional license, cover letter, resume and three references by August 16, 2013, although the position will be open until filled. We are also looking for a health director, who will provide administrative direction, negotiate and administer IHS contracts, develop and administer budgets, write reports, insure HIPPA compliance, comply with ACA, manage EHR, evaluate staff, and insure third party reimbursements are done. Must have a bachelor's degree related to health administration, and two years of management experience. This position is open until filled.

Telephone (360) 374-4366 or visit our website at www.quileutenation.org for a job application and job description. Alternatively, you may contact Roseann Fonzi, Personnel Director, PO Box 279, 71 Main Street, La Push, Washington 98350; telephone (360) 374-4367; fax (360) 374-4368; or e-mail roseann.fonzi@quileutenation.org. (8/13)

Registered Dietitian Consolidated Tribal Health Project, Inc.; Calpella, California

Consolidated Tribal Health Project, Inc. is a 501(c)(3) non-profit, ambulatory health clinic that has served rural Mendocino County since 1984. CTHP is governed by a board comprised of delegates from a consortium of nine area tribes, eight of which are federally recognized, and one that is not. Eight of the tribes are Pomo and one is Cahto. The campus is situated on a five-acre parcel owned by the corporation; it is not on tribal land.

CTHP has a Title V Compact, which gives the clinic self-governance over our Indian Health Service funding allocation. An application for any of these positions is located at *www.cthp.org*. Send resume and application to Karla Tuttle, HR Generalist, PO Box 387, Calpella, California 95418; fax (707) 485-7837; telephone (707) 485-5115 (ext. 5613). (7/13)

Family Practice Physician Jicarilla Service Unit; Dulce, New Mexico

The Jicarilla Service Unit (JSU) is a new, beautiful 65,000 square foot facility nestled in the mesas of northern New Mexico with views of the edge of the Colorado Rockies. We provide care to the Jicarilla ("Basket-maker") Apache community with a population of 4,400. Our clinic has an opening for a board certified/eligible family practice physician for purely outpatient care with a 40 hour work-week. Our site qualifies for IHS and state loan repayment programs. JSU has a fully functional electronic health record system. Our pharmacy has a robust formulary including TNF-alpha inhibitors and exenatide. The clinic also has an urgent care clinic for acute walk-in cases. Our staff currently consists of an internist, three family practice physicians, an optometrist, and three dentists. We also have a team of dedicated public health nurses who specialize in home visits for elders and prenatal follow-up. The Jicarilla Apache Nation is self-sufficient with revenues from oil and natural gas. Much has been invested in the infrastructure of the reservation, including a large fitness facility, a modern supermarket, a hotel and casino, and more. We are also located 45 minutes from the resort town of Pagosa Springs, which has year-round natural hot springs and winter skiing at renowned Wolf Creek Pass.

We welcome you to visit our facility in person. To take a video tour of the Nzh'o Na'ch'idle'ee Health Center online, go to http://www.usphs.gov/Multimedia/VideoTours/Dulce/default.aspx. Please call Dr. Cecilia Chao at (575) 759-3291 or (575) 759-7230; or e-mail cecilia.chao@ihs.gov if you have any questions. (4/13)

Hospitalist

Gallup Indian Medical Center; Gallup, New Mexico

Gallup Indian Medical Center (GIMC) is currently seeking energetic and collegial internists for our new hospitalist program. The hospitalists care for all adult inpatients previously taken care of by family medicine and internal medicine physicians, and provide consultation services. We have seven FTEs for hospitalists, and while we are still growing, we enjoy further inpatient staffing support from internal medicine and family medicine.

GIMC is a 99-bed hospital in Gallup, New Mexico, on the border of the Navajo Reservation. Clinical specialties at GIMC include internal medicine, family medicine, critical care, cardiology, neurology, orthopedics, ENT, radiology, OB/GYN, general surgery, ophthalmology, pathology, pediatrics, emergency medicine, and anesthesiology. The hospitalists' daily census is approximately 25 - 30. There is a six bed ICU. Our patient population includes Navajos, Zunis, and others living nearby, as well referrals from smaller clinics and hospitals.

Gallup has a diverse community and is very livable, offering a thriving art scene, excellent outdoor activities (biking, hiking, rock climbing, cross-country skiing), safe neighborhoods, diverse restaurants, national chains and local shops, and multiple public and parochial school options. The medical community is highly collegial, is committed to continuing education, has an on-going collaboration with Brigham and Women's Hospital, and has a high retention rate.

For more information, contact Eileen Barrett, MD, at (505) 722-1577 or e-mail *eileen.barrett@ihs.gov*. Or please consider faxing your CV to (505) 726-8557. (2/13)

Clinical Director, Family Medicine Physician Kodiak Area Native Association; Kodiak, Alaska

The Kodiak Area Native Association (KANA) is searching for an adventurous, highly motivated physician to lead our team that is committed to patient-centered care, customer service, quality improvement, and stewardship. KANA is celebrating its 47th year of providing patient and family focused health care and social services to Alaska Natives and other beneficiaries of KANA throughout Kodiak Island. KANA's award winning medical staff is comprised of four physicians who work in conjunction with two mid-level providers, dedicated nurse case managers, and ancillary staff to

deliver the highest quality, team based health care to an active user population of 2800 patients. Integrated behavioral health and pharmacy services within the primary care setting also facilitate an advanced support system to ensure our patients' needs are met.

The spectacular scenic beauty of Kodiak Island offers a backdrop for an abundance of outdoor and family activities, including world-class fishing, hunting, wildlife viewing, kayaking, and hiking just minutes from your door. Its sometimes harsh climate is balanced by mild temperatures and unparalleled wilderness splendor that provide Kodiak's residents with a unique lifestyle in a relaxed island paradise.

KANA offers competitive compensation and an excellent employee benefits package, including medical, dental, vision, flexible spending accounts, short term disability insurance, life insurance, accidental death and dismemberment insurance, 401k with employer contribution, fitness membership, and paid time off.

If you're interested in hearing more about how you can start your journey to an adventure of a lifetime, please visit our website at *www.kanaweb.org*, give Lindsey Howell, Human Resources Manager, a call at (907) 486-9880, or contact our HR Department at *hr@kanaweb.org*. Alaska's Emerald Isle awaits you! (2/13)

Pediatrician

Blackfeet Community Hospital; Browning, Montana

This hospital-based government practice is seeking a BC/BE pediatrician to work with another pediatrician and a

pediatric nurse practitioner. Practice true primary care pediatrics with inpatient, outpatient, and newborn hospital care. Attractive call and rounding schedule. Competitive salary with federal government benefits. The area provides a wide variety of outdoor recreational activities, being only 12 miles from Glacier National Park. For more information, please contact Dr. Tom Herr at *thomas.herr@ihs.gov* or call (406) 338-6372. (1/13)

Director, Health and Human Services Ysleta Del Sur Pueblo; El Paso, Texas

The Ysleta Del Sur Pueblo (YDSP) Health and Human Services Department is a team of health care professionals and staff fully committed to their patients' physical, emotional, and spiritual wellbeing, offering a comprehensive range of health and human services that ensure a safe environment, quality service, and accessible health care in an atmosphere of respect, dignity, professionalism, and cultural sensitivity.

YDSP's HHS department is seeking a Director. This person has responsibility and accountability for the development and implementation of a plan to bring HHS to an ongoing operating success. The Director will need the flexibility to make quick and efficient business decisions, while at the same time assuring that operations respect the broad guidelines and, more importantly, the service standards expected by tribal members and tribal leadership. To get more information or to apply, contact Jason S. Booth, CEO, Ishpi, Inc., telephone (651) 308-1023; or e-mail <code>jason@ishpi.biz</code>. (1/13)



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