

# STRONG HEART STUDY

*Cardiovascular Disease in American Indians*



## NEWSLETTER

January 1990

Volume 2, Number 1

### ADVERSE CONDITIONS TAKEN IN STRIDE

In spite of the holidays, flu and bad weather in November and December, the pace of examinations stayed surprisingly strong. As of early January, 961 examinations had been completed including 307 in Arizona, 300 in the Dakotas and 354 in Oklahoma. All centers will continue to do exams throughout the winter because of the need to meet the study goals of 1500 exams in each center and to complete the morbidity and mortality follow-up by March 1991. Centers have developed various strategies to meet these goals due to the unique constraining factors at each center. For example, the Dakota center is most affected by the winter weather and has adjusted clinic operations. It intends to devote more resources to morbidity and mortality review during the winter months in North Dakota. Examinations will continue in the South Dakota clinics. In Arizona, examination rates were projected to be lower in the summer and higher in the winter as more adults are targeted for examination by the NIDDK study in the Gila River Indian Community. In Oklahoma more participants use non-IHS medical facilities and special efforts are being made to access these records. It is important that each center recognize special opportunities to maintain and

enhance response rates and record review so that the Strong Heart Study meets or exceeds its goal in all three centers.

In November, the investigators took advantage of the Diabetes in American Indians and Alaska Native meeting site to include a site visit of the Salt River Indian Community. The site visit team not only saw a well run examination process (which saw five participants that morning) but also met two of the American Indian students, Rosinna Stewart and Roberta Seepie, funded under a supplemental grant program by NHLBI to provide minority students with experience in a research study. It is clear that the Strong Heart Study as well as the students benefit from this program.

In January 9-12, site visits were completed at Eagle Butte and Kyle, South Dakota and in Anadarko and Lawton, Oklahoma. The committee was pleased at the level of performance at each of these clinics. Confidence in the study protocol and procedures is much improved and fewer inconsistencies were noted. One important note for each member of the SHS team: You should have a Manual dated 8/28/89 and revised (see page 35) on 10/2/89.

### THE STRONG HEART STUDY GAINS RECOGNITION

In November the Principal Investigators and the Project Manager for the Strong Heart Study were invited to participate in a program sponsored by the Indian Health Service and the National Institute of Diabetes and Digestive and Kidney Diseases entitled "Diabetes in American Indians and Alaska Natives". The meeting was highly successful because of the mix of participants, that included representatives of the American Indian community and scientists active in studies of American Indians, and because of the

innovative structure of the agenda. Of special value to the Strong Heart Study was the opportunity to present the progress of our study to an ideal audience and the opportunity to discuss study conduct and collaborative efforts with individuals from relevant populations and organizations. We congratulate Dr. Dorothy Gohdes (IHS) and Dr. Peter Bennett (NIDDK) for an excellent meeting and thank them for their supportive comments concerning the Strong Heart Study.

## WHAT IS NHLBI?

The National Heart, Lung, and Blood Institute (NHLBI) should be familiar to readers of previous newsletters as the funding source for the Strong Heart Study. However, what does not seem clear is what is NHLBI, how does it fit in the structure of the federal government and, specifically, how does it relate to the Indian Health Service?

NHLBI is one of twelve Institutes in the National Institutes of Health (NIH). Examples of other Institutes include the National Institutes of Aging, Cancer, Dental Research, and Diabetes and Digestive and Kidney Diseases (NIDDK). NIH is one of several agencies under the Public Health Service which, in turn, is part of the Department of Health and Human Services. The Indian Health Service is also under the Public Health Service and has agency status equivalent to NIH. The IHS is responsible for providing comprehensive health services to American Indian and Alaska Native people. NIH and the specific Institutes are charged with promoting research on the causes and treatment of various diseases. More simply, IHS funds health care delivery and NIH funds medical research.

NHLBI has four divisions: Heart and Vascular Diseases, Lung Diseases, Blood Diseases and Resources, and Epidemiology and Clinical

Applications. It is this last division that includes the Clinical and Genetic Epidemiology Branch and is the specific source for funds for the Strong Heart Study.

NHLBI has a budget of slightly more than one billion dollars, most of which is used to fund research proposed by biomedical scientists throughout, and occasionally outside, the United States. Included in the programs funded by NHLBI are studies of the distribution of diseases in the population such as the Strong Heart Study and the Framingham Heart Study, studies of the effectiveness of drugs to treat high blood pressure and high cholesterol, and research into the development of an artificial heart.

While NHLBI initiated and funded the Strong Heart Study, other government agencies are providing support that greatly enhances the chances of success for this study. Cooperation provided by IHS includes access to medical records for the morbidity survey, access to clinic space for the examinations and limited support for personnel. NIDDK staff in the Phoenix area have worked closely with the Strong Heart Study personnel to merge the examination with ongoing studies to minimize the burden on local participants. This study clearly demonstrates the value of federal agency cooperation.

## THE SALT RIVER CLINIC PARTICIPATES IN STRONG HEART STUDY

The Salt River Indian Community (SRIC) is one of two Pima/Maricopa Indian communities in Arizona which has participated in the Strong Heart Study since its beginning in May of 1989. The Salt River Indian Reservation, approximately 52,000 acres of area, is immediately adjacent to Scottsdale, Arizona on the east side. A rapidly growing area, it contains the Pima cotton fields, a new shopping center, and the campus of the Scottsdale Community College.

The Strong Heart Study conducts physical examinations every Wednesday at the Community Health facility for the Pima/Maricopa Indian Community. The new medical facility, which was opened officially on August 31, 1989, houses the Health and Human Services Administration and the clinics.

The Strong Heart Study staff is located in the ground floor of the Health Center, next to the Pharmacy.

Betty Jarvis, R.N., Project Coordinator, has many years of research experience. She worked with the CDC conducting studies on the Epidemiology of Infectious Diseases in Child Care Centers. Before assuming the job with the Strong Heart Study, she was with the Maricopa County Health Departments in the Department of Public Health as the Program Coordinator for immunizations. She was involved in a multinational project on giardiasis in young children. She still functions as a consultant for major child care policy issues in the State of Arizona. She has done a outstanding job organizing the Strong Heart Study and establishing the clinic in the SRIC.

Paula Harper, R.N., has also been with the Strong Heart Study since its beginning. She has much clinical nursing experience centering on trauma, emergency medicine, and diabetes. She is a certified diabetes educator. Before joining the Strong Heart Study she worked with CIGNA, a large health maintenance organization in the Phoenix area. Paula is the founder and director of the International Diabetic Athletes Association, and works to promote exercise and athletic participation among diabetics around the world. Paula has been especially valuable in diabetes education among the Strong Heart Study Participants.

A. Wayne Santo, a resident and a member of the SRIC, is the recruiter and driver for the project, and also performs the personal interview on all SRIC participants. Before joining the Strong Heart Study he worked for the SRIC Housing Authority. He was in the U.S. Marine Corps for 3-1/2 years stationed at Camp Pendleton. He has made an especially valuable contribution to establishing the Strong Heart Study among the SRIC and its residents and the outstanding record of participation has been largely due to his efforts.

Rosinna Stewart is a student research assistant (See article on Student Assistants in Newsletter of October 1989). She previously worked at Scottsdale Memorial, hospital. She administers the physical activity questionnaire, prepares

blood samples, assists in scheduling, and enters data in the computer. She has been an enthusiastic contributor to the Strong Heart Study, and has exhibited an aptitude and interest in research.

Roberta Seepie is our other student research assistant (also see Newsletter, October 1989). She also works for the WIC program in the Salt River Community Center, and before that she was a Head Start teacher. For the Strong Heart Study she edits all the forms and has developed and edited the population list of the SRIC members eligible for the Strong Heart Study. Her work has been of a high quality, and her exactness in editing forms has especially pleased the Coordinating Center.

In addition to the regular staff, many other people have contributed to the effort to the SRIC, including Mrs. Alfretta Antone, Vice Chairman of the SRIC, Bev Warne, Supervisor of the Community Health Nurses, Steve Thompson, Nurse Practitioner at the Salt River Clinic. Eddie Smith, M.D., Medical Director of the Salt River Clinic, Vicki Clark, a Nurse Practitioner at the SRIC, and Frank Mertly, Community Manager, who supervised the construction of the clinic facility. Other support people include Sherilla Mckinley, the Health Educator, Judy Fulwilder, Nutritionist, Carmalita Estenson, a Nurse on the Summer Co-step Program, and Allison Drash, a Summer Student.

## THE COORDINATING CENTER - BUZZING WITH EXCITEMENT

The Coordinating Center has been buzzing with excitement ever since the Strong Heart Study was funded, long before the staff at each examination center started to work. They have compiled the information sent from the Steering Committee and produced the 400-page study manual. They have also generated the Study brochure, the quarterly newsletters, and the data forms. It is estimated that more than a quarter of a million pages of paper has been used to generate these works.

The Coordinating Center is currently proceeding with its most important task, namely managing and analyzing the vast amount of data received from the examination centers, the Core Lab and the ECG Center.

The Coordinating Center is fortunate to have

excellent computer facilities. A powerful scientific word processor, EXP, was used to generate the study manual, data forms, brochure and newsletters. SAS/FSP, as the database management system, combines the convenience of interactive, full-screen facilities for data entry, editing and retrieval with programming capabilities of SAS software. Andy Cucchiara, a Ph.D. in biostatistics, is currently installing UNIX on the Strong Heart Study computers. UNIX will enhance computer access by allowing several people to use the same computer simultaneously.

The strength of the Coordinating Center lies in the quality and experience of its staff. Jeunliang Yeh, who received his Ph.D. in epidemiology in 1989, coordinates all the



Coordinating  
Center and SHS  
staff :  
Left to Right -  
Front -  
Rachel Fiedler  
Ronald Tso  
Back -  
Dr. J. L. Yeh  
Sherry Jackson  
Dr. A. Cucchiara  
Lela Brown  
Dr. E. T. Lee

activities of the Coordinating Center. Yeh (as he prefers to be called) reviews all the data forms from the three examination centers and acts as a troubleshooter. He reports all the missing and questionable data, duplicated lab results, or any other inconsistencies to the respective examination center, Core Lab or ECG Center. He also ensures that all the requested analyses are properly performed.

Lela Brown, an experienced statistician with an M.S. degree, has worked at the Federal Aviation Administration as a health statistician for 3 years and as a statistical analyst for the State of Oklahoma for 2 years before joining the Study. Ms. Brown, serving as Data Manager for the Study, has built the entire database using SAS/FSP for all the data collected in the Study. The database consists of more than 60 files for the mortality survey, morbidity study and clinical examinations. In addition, Ms. Brown is responsible for quality control of all the data the Coordinating Center enters as well as for performing statistical analysis for the Study. Ms. Brown, a native of Oklahoma, plans to pursue a doctoral degree in biostatistics.

Rachel Fiedler, together with Ms. Brown and Yeh, worked on the study manual and set up the format for all the study forms. An excellent programmer, Ms. Fiedler made an important contribution in producing the newsletters, the study manual and all the high

quality data collection forms. Ms. Fiedler, originally from Singapore, lives in Norman, Oklahoma with her husband, a professor of meteorology at the University of Oklahoma.

All the data received by the Coordinating Centers, are entered into the computer by Sherry Jackson. Ms. Jackson has been working with computers for six years. To minimize data entry errors, the data are verified by Ronald Tso and LaRose Lucero, both graduate student assistants (see October 1989 issue of Newsletter).

The Coordinating Center appreciates the efforts of all the field staff to improve the data quality. Together we can make the Strong Heart Study a significant contribution to the epidemiology of cardiovascular disease.

#### ADDENDUM

The following two students also worked at the Dakota clinics: Lakota Kruse, M.D., graduate of the University of Pennsylvania School of Medicine and member of the Omaha Tribe and Vince Whipple, a Harvard pre-medical student and member of the Cheyenne River Sioux Tribe. Dr. Kruse worked at Ft. Totten. Mr. Whipple worked at Rapid City and plans to return next summer to the project. Gregory Cost was misspelled as Coat in the last issue. Veronica Williams is a Jicarilla Apache not a Turtle Mountain Chippewa.