



Strong Heart Study Newsletter

Investigating Cardiovascular Disease in American Indians
Updates for Community Members and Strong Heart Study Participants
Volume 35, Issue 1 Spring 2025

Strong Heart Study Tap Water Study Finds Overall Improvements in Water Quality

Preliminary results from water samples from Strong Heart Study (SHS) communities show a significant decline in arsenic and uranium levels in drinking water, with areas like Oklahoma having no samples with levels above federal guidelines. This reflects substantial progress in improving drinking water quality. We've been distributing return-of-results letters to participants and are currently working on drafting an updated version. The new draft will include more detailed reporting of water quality values, pending Tribal approval.



New Study to Further Evaluate Water Quality for Communities

A new study connected to the Strong Heart Study (SHS) was launched in the Fall of 2024, called "**Water For Health: Strengthening Tribal Action for Cancer Prevention.**" The Water For Health study aims to support all Tribal Nations participating in the SHS to reduce potential arsenic and uranium exposures for all residents. First, the new study will evaluate water quality across all SHS communities to identify areas of concern. Leveraging the SHS, we will evaluate if historical water exposures to arsenic and uranium were associated with cancer incidence.

In addition, our community partners will travel to each Tribal Nation, where community members and leaders will identify priorities, needs, and potential intervention plans to improve water quality and access within their communities. Each community will have the opportunity to develop their own intervention plans to reduce water arsenic and uranium.

In Remembrance of Dr. Tom Welty (1943 - 2024)

-Lyle Best, MD Strong Heart Study investigator

Sometimes what best defines us is how we handle the difficult times, and that is especially true for my deep respect and admiration of Dr. Tom Welty (the first person standing on the right).

On Feb 24, 1994, while traveling to the Turtle Mountain community in North Dakota, three Indian Health Service (IHS) physicians, Dr. Arvo Oopik (The second person standing on the right), a cardiologist and Strong Heart Study researcher, Dr. Chris Krogh, a maternal-child health consultant, and Dr. Ruggles Stahn, a diabetes specialist, died along with their pilot while

attempting to land in a severe blizzard.

I was in the clinic at Belcourt that day and remember vividly the shock we all felt at losing the good friends we had come to know over the years. Dr. Welty supervised all

three physicians and was left to attempt reconciling this horrific loss both to the families and himself.

As the years went by, I saw Tom work tirelessly in his signature humanitarian approach to honor the sacrifice these men had made, through community ceremonies, personal remembrances and close support of the surviving families. If you visit the beautiful new Oyate Health Center in Rapid City, please wander down to just above Canyon Lake Drive and visit the memorial site for these doctors.



More tributes to Dr. Welty can be found on pages 3, 4, and 5.

COMANCHE NATION AND STRONG HEART STUDY HOST 35TH ANNIVERSARY CELEBRATION COMMUNITY MEETING

On October 23, 2024, the Strong Heart Study (SHS) celebrated its 35th anniversary with a Community Meeting co-hosted by SHS and the **Comanche Nation** at the Comanche Nation Watchetaker Hall in Lawton, Oklahoma. The event, attended by study participants, tribal members, health professionals, and researchers, highlighted the success and ongoing impact of the study.

The event began with welcome remarks from **Ms. Lisa Dawsey**, Tribal Administrator of the Comanche Nation.

Six scientific presentations followed, providing valuable insights from SHS research:

- ◆ **Dr. Tauqeer Ali** gave an overview of the Strong Heart Study, emphasizing its historical significance, contributions to cardiovascular research, and the vital role of study participants. On behalf of the SHS, Dr. Ali acknowledged and thanked the continued participation and support of participants, whose involvement is essential to the study's success and its contributions to cardiovascular health in Native American communities.
- ◆ **Dr. Amanda Fretts**, from the Dakotas Center, discussed the relationship between diet, physical activity, and overall health.
- ◆ **Dr. Dorothy Rhoades** explored cancer studies within SHS, shedding light on emerging trends.
- ◆ **Dr. Jason Deen**, from the Arizona Center, presented on cardiovascular risk factors in American Indian youth.
- ◆ **Dr. Shelley Cole**, from the Genetics Center at Texas Biomed, shared findings from the Strong Heart Liver Study.
- ◆ **Dr. Jessica Reese** addressed elevated blood fat levels in American Indian adolescents and young adults and their long-term health implications.



The event was further enriched by cultural performances from the Comanche Daycare and Dance Troupe (picture on the left), celebrating rich heritage of the Comanche Nation.

Around 250 tribal members attended, including tribal leaders, members of the Southwest Oklahoma Intertribal Health Board, Oklahoma City Area IHS IRB personnel, the Chief Executive Officer of Lawton Indian Hospital, and the Facility Unit Director of the Anadarko Indian Health Center. These attendees actively engaged with presenters, contributing to dynamic discussions.

The generous support of the Comanche Nation greatly enhanced the event, making it truly memorable. The Comanche Nation provided all attendees with T-shirts (the middle picture shown below). Additionally, breakfast and beverages were provided, enriching the experience and fostering a welcoming atmosphere.

The SHS provided tote bags (picture on the left below), and offered lunch to all attendees, further strengthening the sense of community and collaboration.

This 35th Anniversary Celebration highlighted the ongoing partnership between the Strong Heart Study and its partner tribes, reflecting their shared commitment to improving the health and well-being of Native American communities. The event successfully blended education, culture, and community-building, marking a significant milestone in the study's history.



Thomas Koester Welty
1943 - 2024
A Well-lived Life of an IHS Physician



Thomas Koester Welty, M.D., M.P.H. passed away after a long, hard-fought battle with metastatic prostate cancer on November 14th, 2024 in his home in McCall, ID after celebrating his 81st birthday on November 7th with his family and friends. He was born on November 7, 1943 to parents Fred and

Margaret Welty in Homestead, PA. As an only child, he was their pride and joy (and free labor). He grew up on their Christmas tree farm, and as a kid would pull a wagon full of vegetables around to sell to the neighbors for a little extra cash.

He went to the College of Wooster from 1961-65, and majored in Chemistry. From there, he went to the University of Pittsburgh from 1965-69 for Medical School, where he met the love of his life, Edith Roberts. He was bedazzled by her when he borrowed her microscope and embryology book. And she was amazed by his talent for sleeping through class, and somehow with his brilliance, he would still ace the tests. They were married 4/15/68 in Pittsburgh, PA. Their daughter, Julie, was born in 1969, as Tom finished internship, and Edie was his supervisory resident.

When Tom finished internship, and Edie was pregnant with their second child, they had the choice of being drafted to Vietnam as docs, or working for the Indian Health Service (IHS), or the Bureau of Prisons. **Choosing, IHS, they were deployed to Tuba City IHS Hospital, Navajo Nation, AZ as commissioned officers in the US Public Health Service.** There were limited medical resources on the Reservation in those days, so caring for their patients involved quite a bit of ingenuity.

Their 2nd daughter, Anna, was born at home, delivered by Tom in Tuba City in 1970. Tom and Edie served the Navajo and Hopi Nations for 12 years and Tom served as the Service Unit Director (CEO) for the hospital for 6 of those years. **This experience ignited their passion for providing healthcare for underserved communities.** Their time on the reservation also inspired their love for crazy camping, hiking, backpacking, cross-country skiing, 4-wheel road-driving adventures, etc., often including neighboring Navajo and Hopi kids and friends in tow.

In 1982, they decided to move the family to Atlanta, GA to work at the Centers for Disease Control and Prevention (CDC). They spent 3 years there to train in the study and control of epidemics and toxic waste sites, and Tom got his Masters in Public Health. **In 1985, they moved to Rapid City, SD, to work at the Sioux Indian Hospital and other surrounding reservation hospitals where they worked until 1997.** During this time, Tom helped to devise and build the **Strong Heart Study** among the Lakota (Sioux) Tribe, looking at risk factors for heart disease among tribal members. He retired as a Captain in 2006 from the US Public Health Service Commission Corps.

Tom and Edie moved to McCall ID in 2007 to help their daughter and son-in-law Julie and Jared take care of their grandsons,



The late Dr. Welty (first on the left), Dr. Lee (third from the left), Dr. Howard (fourth from the right), the late Dr. Cowan (second from the right), Dr. Fabsitz (first on the right), and other Strong Heart Study investigators had a meeting in Oklahoma City.

Camas and Conrad. They have made many friends here in McCall and have been actively involved in the Hiking Club, and volunteered for various local organizations including Save the South Fork, the Payette Endowment Lands Alliance, and Firewire. They have donated to the Library, the Little Ski Hill and various other organizations and have volunteered for multiple kids races and other events.

In the last 25 years of their "retirement", Tom and Edie spent 6 weeks once or twice a year in Cameroon, Africa, working to educate local healthcare workers on reducing the transmission of HIV/AIDS, thereby helping to stop AIDS from becoming a more widespread pandemic.

(Continued on the next page)

Since then, the Welty's have supported both financially and programmatically several Cameroonian programs, including Advanced Life Support in Obstetrics (ALSO), Women's Health Program (screening and prevention of cervical and breast cancer, family planning, and treatment for reproductive tract infections). As of early November 2024, the director of the Cameroon Health Board announced that an area of the first children's hospital in all of Western Africa is being built thanks in part to the efforts of Tom and Edie Welty, who helped them to buy the property for the hospital facility. In recognition of Tom and Edie's years of work, parts of the new hospital will be named the Tom Welty Children's Hospital.

For a man who spent his life advocating for health equity, social justice, and the well-being of underserved populations, his passing feels not just premature, but tragically avoidable. Following nationally recommended guidelines, he stopped getting screened for prostate cancer at age 70. These guidelines, while well-intentioned and based on an average life expectancy of 77, fail to account for individuals like Tom, who are healthy and remain active into their later years. Unfortunately, at age 79, Tom had urinary symptoms prompting a workup which found metastatic prostate cancer, which he finally succumbed to after nearly 2 years of different treatments. Prior to his prostate cancer diagnosis, Tom was an avid outdoorsman, hiking 30 miles a week, and his energy and health were those of a much younger man. His positive attitude throughout his battle with cancer helped him hold out long enough to vote and to celebrate his last birthday (he was a strong advocate for the Democratic principles of helping the underserved and protecting our public lands).

Tom and Edie's work with the Navajo, Hopi and Sioux populations and the Cameroon, Africa population inspired a lifetime of healthcare service and health education, both for themselves and for students and colleagues they have mentored. Due to their work and travels, the Weltys have built a huge community of friends and fellow travelers on this planet. **We hope Tom's life is an inspiration to you! Thank you to all who have been a part of this journey!** Tom is survived by his wife Edie Welty, his daughter Julie Welty, his son-in-law Jared Alexander, his daughter Anna Welty, and his grandsons Camas and Conrad Alexander. (Source: <https://wooster.edu/classnotes/>)



The late Dr. Welty (sitting in red vest) taught the cervical cancer prevention and colposcopy course in Mboppi Baptist Hospital, Douala, Cameroon. From *Int J Gynecol Cancer*. 2020 Apr;30(4):551-552

The Dr. Tom Welty I Have Known

- Richard Fabsitz, PhD, Strong Heart Study Investigator

I didn't meet Tom until the National Heart, Lung, and Blood Institute approved the request for applications to fund the Strong Heart Study. Our first meeting was during a site visit in South Dakota to meet the investigators and Tribal Leaders relevant to his proposed center. I was immediately struck by his dedication to American Indian health, and his extensive experience serving the interests of American Indians over his career.



Tom, took in one of the Strong Heart Study offices at Eagle Butte, SD.

That immediate impression of Tom strengthened as we began the detailed planning for the examination and surveillance components of the planned 3-year study. Tom was always eager to do his part and frequently

volunteered to take responsibility for components of the protocol. He offered insight into both opportunities and challenges that would confront the investigators as they developed the extensive protocol required to guide the study.

Yes, there were many challenges, but Tom always offered an optimistic view of how we could seize the opportunities and overcome these challenges that confronted us. His experience as a community clinician, combined with his understanding of the local healthcare system and his close relationships with community leaders, were invaluable in facilitating the successful execution of the study from its initial phase through the subsequent seven phases.

Several examples stand out as I think back to those early days of our working together. The first was Tom's principled stand that the study participants would receive a summary of their exam results, and that abnormal results would require a referral to the Indian Health Service, **(continued on the next page)**

ly volunteered to take responsibility for components of the protocol. He offered insight into both opportunities and challenges that would confront the investigators as they developed the extensive protocol required to guide the study.

(continued from Page 4) so that those abnormal results would be addressed.

The second was that Tom thought the study should work with the IHS physicians and other health care providers to alert them to study findings and keep them apprised of study progress. This was a win-win as IHS staff received up-to-date scientific advances related to heart disease among American Indian communities. In turn, they provided insight to the health problems they routinely address in practice that can be explored with data gathered as part of the study.

The third was Tom's feeling that the communities should benefit from the conduct of the study within their boundaries. This led to the hiring of local staff, whenever possible, and emphasis on training and quality control to achieve the highest quality data. Emphasis was placed on holding community meetings where results from the study would be shared and feedback received. In addition, summary data was made available to the communities, so they can use that data for planning and submissions to funding opportunities.

Finally, Tom displayed resilience to adversity that inspired all the Strong Heart Study staff. Due to the rural nature of the reservations and the lack of available medical equipment, Tom proposed, and helped, design mobile vans that could serve as exam facilities in remote areas. After over a year of seeking approval for the van from IHS, and after the other two centers had taken delivery of their vans, Tom had to give up and find alternate approaches to meeting the requirements of the study. The other occasion of resilience was the tragic airplane crash that took the lives of three of the clinicians serving the Aberdeen area and/or the Strong Heart Study. Tom persevered through this difficult loss to keep the clinical and research efforts functioning.

I would be remiss in not mentioning Tom's love of physical activity and the outdoors and embracing what the area had to offer. Visits to his center always involved some physical activity such as hiking, and walks through the woods or his neighborhood. In addition, he would sprinkle in some historical insight such as climbing Bear Butte, visiting Wounded Knee or a stop in the BadLands to gain a better understanding of the communities and rural setting, in which he lived and worked.

Tom was a creative and inspiring leader, a team player, an outdoorsman, a caring person, and a joy to be around. After retirement from the Indian Health Service, Tom went on to serve the health care needs of communities in Africa. Those of us who had the opportunity to work with him for an extended period were not surprised; to have known him is to truly appreciate that his life was a life well-lived.



Rich (first on the left) , Tom (by Rich in the back row), and other Strong Heart Study investigators visited Indian City in Anadarko, OK.

Strong Heart Data and Mentorship Supports Research by Native American Summer Intern



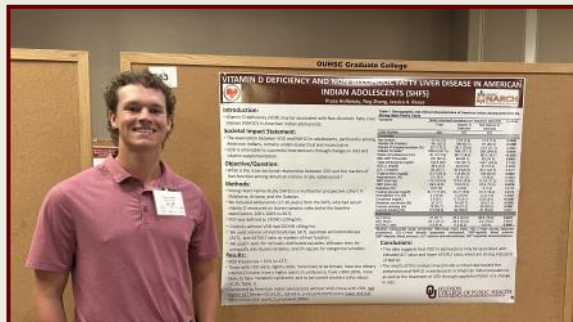
Pryce Holloway (left), a member of the Osage Nation, was one of the 2024 summer interns in the University of Oklahoma Health Sciences (OUHS). He is a Junior in the Tabor College.

Pryce was part of the OUHS Native American Research

Center for Health (NARCH) Summer Undergraduate Research Program. He was mentored by Dr. Jessica Reese (right) to study vitamin D deficiency and non-alcoholic fatty liver disease in American Indian adolescents in the Strong Heart Family Study.

While working on the research project, Pryce was accepted by the American Indians Accessing Health Professions Program, a free program designed to provide American Indian/Alaska Native undergraduate students an exposure to different careers in health professions. He had a great learning experience at the UCSD School of Medicine on July 25-28, 2024!

We wish Pryce the best in his pursuit of a health care professional career!



STRONG HEART STUDY COORDINATING CENTER
 University of Oklahoma Health Sciences Center
 Center for American Indian Health Research
 College of Public Health
 P.O. Box 26901
 Oklahoma City, OK 73126-0901

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The seventh phase of the Strong Heart Study (SHS7) Exam will conclude in two months, on March 31, 2025. If you have previously participated in the SHS but have not yet taken part in SHS7, we encourage you to contact your local SHS office to enroll. As a token of our appreciation for your time and effort, you will receive compensation for your participation.

Arizona	North and South Dakotas	Oklahoma
Phoenix Office	Cheyenne River SHS	Anadarko office
Tanya Molina	Marcia or Kendra	405-247-1029
602-598-8201 (Direct- line)	605-964-1260	Lawton office
Or	Oglala Sioux Tribe SHS	580-353-1163
602-277-0488 (Office)	Tracy, Francine, or Manuela	Oklahoma City
StrongHeart@medstar.net	605-390-7063, 605-867-2486, 605-455-1189	Evelyn Lanham
	Spirit Lake SHS	405-271-3090 Ext: 6
	Megan	Dr. Tauqeer Ali
	701-766-4236 or 701-350-0756	580-678-9935