

## Meet the Laboratorian - Keith Beardshear

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Keith Beardshear is the Laboratory Supervisor of the United States Public Health Service (USPHS) Indian Hospital and associated clinic in Winnebago, Nebraska. Keith's work at the Indian Hospital is truly unique in Nebraska as his work directly benefits Nebraska's Native American population.

### **What got you interested in pursuing a career in laboratory science?**

I was raised on a small farm in northeast Nebraska. From that perspective, it was easy to observe the natural life cycles of both plants and animals. Biology became second nature to me. On a similar note, chemistry applications are readily found in the agricultural setting. In that early crucible of learning, it became natural to apply those experiences with the basic sciences we are taught in both the high school and college settings.

### **Where did you attend med tech school?**

I received my medical technology training while serving in the United States Air Force (USAF). I did my year internship at Wilford Hall USAF Medical Center, located in San Antonio, Texas. At that time (late 70's) Wilford Hall was a 1000 bed referral hospital for USAF military personnel. After finishing the MT internship, I continued to work in the hematology department of the laboratory until my tour of duty was completed.

### **How long have you worked in your present location?**

I have been employed at the Winnebago USPHS Indian Hospital since 1981. Our hospital is one of hundreds of Indian Health Service facilities that serve the Native Americans Population. Indian Health Service is part of the United States Public Health Service which, in turn, falls under the auspices of the Department of Health and Human Services. Our hospital and clinic serves a population base of approximately 14,000 individuals.

### **What is unique about working at the Winnebago USPHS Indian Hospital?**

The Winnebago USPHS Indian Hospital/Clinic is geographically located on the Winnebago Indian Reservation in northeast Nebraska. We serve the Native American population from two adjacent reservations, the Omaha and Winnebago. We also provide medical services for Native Americans who live in urban centers such as Omaha, Lincoln, Norfolk, and Sioux City. Both the Omaha and Winnebago Tribes are rich in native culture and tradition. Each has unique cultural aspects derived from tribal customs. The Omaha Tribe still lives on some of its original homeland. The Winnebago Tribe was deported from its native land of Wisconsin and traveled to the current reservation location. They purchased land from the Omaha Tribe. It is here where many Winnebago descendants remain today. If you have not experienced a pow wow consider attending during the late summer months. The regalia are colorful and the dancing to the rhythm of the drumbeat is something that should be experienced.

The two reservations are not as isolated as some. They are located approximately 80 miles north of Omaha and 20-25 miles south of Sioux City, Iowa. Much of the reservation land consists of farms nestled between the rolling hills. The eastern edges of the reservations overlook the Missouri River.

### **What is the biggest challenge you face in your job today?**

Meeting laboratory program objectives has become increasingly difficult, primarily due to an ongoing technical staff shortage that we face at Winnebago. It has not been easy for us to recruit qualified individuals.

### **What advice would you give to a first year medical technologist?**

Follow the advice of experienced and seasoned technologists. They can guide you through the first few months and years of your career. In my opinion, experience is the greatest of all teachers, so follow the wisdom of those whose skill and understanding has been developed in a given area of medical laboratory expertise.

### **What do you think is the single biggest change in the laboratory since you started?**

Without a doubt, the advances in instrumentation and test methodology stand at the top of my list. When I began as a technologist, the transition from manual testing to automation was starting to gain momentum. Yet, at that time, a major part of our curriculum was to manually perform chemistry and



hematology tests. Mouth pipetting was still a common practice. Glassware had to be washed and reused. We became proficient with a variety of pipetting techniques and at performing manual hematology cell counts. SMAC analyzers were chemistry workhorses in larger laboratories. Alkaline picrate permanently stained many countertops and floors. Coulter had progressed to the Model-S hematology analyzer. Microorganisms were being renamed, based more on genetics than morphology and biochemical reactions. Wang was a big name in laboratory computers when I was new to the field. I marvel at the genius of the researchers and engineers, who have developed laboratory medicine to the point it has reached today, yet wonder how much more it will advance in another 20 years.

**What do you like most about your job?**

There are really two aspects that I most enjoy in working in the smaller lab setting. First, I like the variety of challenges that we face from day-to-day. No two days are alike. We need to be self-reliant in many aspects with the ability to solve a variety of problems. Secondly, it is rewarding to perform testing on patients who we know as individuals. There is a stark difference between working in a large lab where patients are associated with a series of tubes and numbers, as opposed to more individualized testing within the smaller rural laboratory. We function primarily as a “stat lab”, generating test results while patients are waiting. Giving providers test result information during the actual clinic visit has undoubtedly enhanced patient care here at the Winnebago USPHS Indian Hospital.