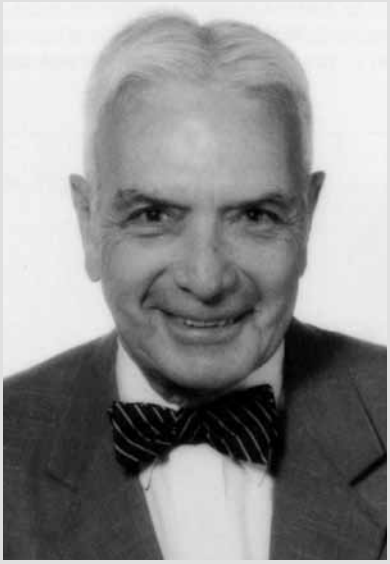
In memoriam:

Harris B Shumacker, Jr., MD, FACS, remembered

by David L. Nahrwold, MD, FACS

Indiana's legendary surgeon, Harris B Shumacker, Jr., died on November 14, 2008, in Gladwyne, PA, at the age of 101. Dr. Shumacker received the College's Distinguished Service Award, its highest honor, in 1968. With his death, surgery lost one of the last great triple-threat giants on whose shoulders so many of us have stood.

Dr. Shumacker was born in the Deep South in Laurel, MS, where he lived until age seven, when his parents, both native Mississippians, moved to Marianna, AR—a small town on the Mississippi Delta. His first memory was of wanting to be a doctor, "like other boys wanted to be a policeman or fireman," he said.*



Dr. Shumacker

Academic excellence

The school system in Marianna was noted for its excellence. Dr. Shumacker, an outstanding student, was admitted to Harvard without admission testing or a visit. But before he enrolled, one of his cousins, who lived in Chattanooga, TN, contacted him to say that he had to stay in Chattanooga for college because his father was having financial problems. He pleaded with Harry to attend the University of Chattanooga, a small Methodist college that is now part of the University of Tennessee. Dr. Shumacker turned down his acceptance at Harvard and attended the University of Chattanooga, the first in a lifetime of unusual career decisions that went against the grain, but always seemed to turn out well. He had been told by his high school adviser to get permission from the dean to take more than the conventional number of courses in college, and he did, which resulted in Dr. Shumacker graduating in just two years. He was then accepted into the Johns Hopkins University School of Medicine, Baltimore, MD.

Again, he went against the grain. A professor Dr. Shumacker respected thought he should become a basic scientist and obtained a biochemistry fellowship for him at Vanderbilt University, Nashville, TN. Worried that he might have some trouble with biochemistry at Johns Hopkins, and aware that he was two years younger than most potential medical students, he accepted the fellowship and received a master's degree in chemistry. Chemistry was not a subsequent forté, but it was at Vanderbilt that he learned how to do research, working long hours into the night on his projects. Although much later he expressed regret for not attending Harvard and not entering Johns Hopkins a year earlier, his lifelong penchant for serious inquiry and his commitment to basic and clinical research may well have been founded from that year at Vanderbilt.

He entered Johns Hopkins in 1928, when the curriculum was very flexible, and the faculty encouraged students to think and act on their own. This was

*Interview of Dr. Harris B Shumacker, Jr. Indiana University Oral History Research Center. Indiana University, Weatherly Hall, North 112, Bloomington, IN. Accession #93-9-1, 2, 3, 1993.

the perfect environment for Dr. Shumacker, whose curiosity was insatiable, and he flourished. He gravitated toward surgery, substituting for interns in obstetrics and otolaryngology. He spent six months at the Massachusetts General Hospital, Boston, MA, with the venerable Arthur Allen, MD, FACS, himself a Johns Hopkins graduate who was delighted to have a Hopkins student with him. After the death of a patient from a transfusion, then not a minor procedure, Dr. Allen asked Dr. Shumacker how they conducted the procedure at Hopkins, and then used the technique that he described.

After graduating from Johns Hopkins in 1932, he interned there and subsequently worked in the laboratory with his Johns Hopkins surgical mentor, Warfield "Monte" Firor, MD, FACS, performing basic animal studies to study the pituitary-adrenal axis. Dr. Shumacker immersed himself in research, publishing papers on adrenal hormones with Dr. Firor and on macrocytosis with the young hematologist Max Wintrobe, MD, who later became an icon in the field. Dr. Shumacker observed that some patients with liver disease develop macrocytic anemia, wrote a paper describing this new finding, and gave it to Dr. Wintrobe, who submitted it listing himself as the first author. Dr. Shumacker told this story again and again as a humorous tale, but he had difficulty disguising his real feelings about the incident. It was the stimulating Dr. Firor who became his advocate and advisor, directing him to the residency at Yale University, New Haven, CT, when it became apparent that he would not be appointed resident at Johns Hopkins.

At Yale, under Samuel Harvey, MD, FACS, he was appointed resident and had a very broad surgical experience, performing the gamut of general surgery procedures as well as head and neck surgery, hysterectomies, and cesarian sections. Dr. Harvey offered him a faculty position, but Dr. Shumacker, now married to his southern belle Myrtie, decided to look around. When nothing exciting materialized, he consulted Dr. Firor, who arranged for him to return to Johns Hopkins to develop the cardiovascular service, which consisted mostly of sympathectomies. Most of them were done by the neurosurgical service, but the supposedly avaricious chief, Walter Dandy, MD, FACS, graciously turned them over to Dr. Shumacker.

Alfred Blalock, MD, FACS, who was appointed chairman in 1941, kept him on as his senior associate and asked him to stay with him during World War II, but the adventurous Dr. Shumacker chose to go to war with the Johns Hopkins General Hospital unit, which was using a portion of the Royal Prince Albert Hospital in Sydney, Australia. After a year, he was appointed chief of service of a station hospital that later moved to New Guinea; however, he developed a partial paralysis of his leg and was sent back to the states in 1944.

A leader and a teacher

During his recovery, Dr. Shumacker was assigned by GEN Fred Rankin, probably with help from Dr. Blalock, to establish the Vascular Center at Mayo General Hospital in Galesburg, IL. It was there that his understanding of vascular problems and his vascular surgery skills were honed, due to the fact that he was in charge of a unit that housed as many as 400 patients with vascular injuries and diseases. As Dr. Shumacker once wrote, "…traumatic aneurysms filling one entire ward, arteriovenous fistulas another, injuries of a major artery another, various vasomotor difficulties still another, and so many troublesome sequelae of frost bite and trench foot that hundreds had to be put on sick leave."[†] In Galesburg, he also developed a deep and enduring relationship with John "Jack" Gibbon, MD, FACS, who was chief of the surgical service. Later, as his biographer, he described Dr. Gibbon as his best friend. He wrote many papers from that experience, and by the time he returned to Johns Hopkins in 1946, more than a year after the war ended, he had a national reputation within surgical academia. He was admitted to membership in the Society of Clinical Surgery and to fellowship in the American Surgical Association.

Within a week, Yale beckoned once again, and later in 1946, he returned as associate professor to start their cardiac surgery program. This was an exciting time in medicine, marked by early efforts to ameliorate, or cure, congenital conditions of

[†] Shumacker HB Jr. Reminiscences of John H. Gibbon, Jr., MD. *Ann Thorac Surg*. 2003;76:S2195-S2197.

the heart and great vessels with the Blalock-Taussig procedure, ligation of patent ductus, and repair of coarctation of the aorta.

In 1948, he was persuaded by its celebrated president, Herman B Wells, to come to Indiana University as the professor and chairman of surgery. Mr. Wells wanted to develop a full-time faculty in the medical school and understood the need to provide them with research facilities and seed money. Dr. Shumacker's East Coast mentors and colleagues, including Dr. Blalock, thought he was crazy to give up his position at Yale for a job in the hinterland, but taking on a challenge like this was now characteristic of the man who went to Chattanooga instead of Harvard.

A magnet for patients

Dr. Shumacker established a five-year residency program, gradually built up the full-time faculty by selecting young men from his residency program, and established a research laboratory that was always in operation, staffed either by his own residents or a long succession of research fellows from all over the world—many of whom returned to their countries to become leading surgeons.

Because no cardiovascular surgery had been done in the state up to that point, Dr. Shumacker was the magnet for every patient in Indiana who had a surgical vascular or cardiac problem. The Riley Hospital for Children, Indianapolis, IN, and its clinics were filled with infants and children with every imaginable congenital lesion of the heart or great vessels. Dr. Shumacker performed almost all of the cardiac and vascular "firsts" in Indiana.

Soon, pediatric and adult cardiologists were on the faculty, using the latest technology such as catheters (supplied by the fledgling Cook organization in Bloomington) to make diagnoses, and a crude ultrasound apparatus used to diagnose pericardial tamponade. It was not unusual for him to do two mitral valvulotomies using his finger through the left atrial appendage, an abdominal aortic aneurysm resection (at first replaced by a nylon graft made from a parachute, sewn by a nurse), and division and suture of a patent ductus in an infant—all before lunch.

Before coronary artery surgery, he began every morning with an open heart procedure using cardiopulmonary bypass. Interspersed throughout the day, at night, and on weekends were patients with ruptured aneurysms, emboli, ischemic limbs, and vascular or cardiac trauma. In the early years, the mortality and morbidity rates were high, as they were everywhere. In due course, the load was shared by his faculty, and the procedures became routine.

Dr. Shumacker was a master of bedside teaching, asking patients to describe their illnesses and pointing out physical findings. He made rounds by himself every morning before 6:00, but he expected his team of residents, interns, and students to make all the necessary decisions and to write the orders and progress notes. He was a perfectionist, and he demanded the same in others through his example. Occasionally, he wrote an order for something insignificant, or a progress note that described, for example, the strength of the anterior tibial pulse in a revascularized leg. When he did so, his residents took it as their reprimand, but they had no idea if he meant it as such; they simply wanted to be as good as he was.

Leading by example

Dr. Shumacker inspired medical students and residents by his example, to think, to innovate, and to strive for perfection. He understood that leadership is one of the performing arts. He used his deep, southern voice, his command of grammar, logic, and rhetoric, and his considerable oratorical skill to impart the lesson he was delivering. More often than not, his students not only learned from him, they were smitten by his presence, what he had to say, and how he said it.

His basic and clinical research is recorded in approximately 600 publications. Many describe innovations and improvements in vascular and cardiac procedures. His studies on frostbite during the Korean conflict were seminal, showing that slow rewarming of the affected part produces the best outcomes. With Harold King, MD, FACS, he discovered the association between splenectomy in children and their susceptibility to severe infection, an observation that led to pneumococcal immunization, and, eventually, to splenic conservation techniques.

Fifteen years after Dr. Shu-

macker worked with Arthur Allen, MD, FACS, as a medical student, Dr. Allen, as Chairman of the Board of Regents of the American College of Surgeons, appointed him to the fledgling Surgical Forum Committee, which he chaired for five years. He made the Forum the premier assembly before which young surgeons presented their best work. The 1968 volume of Forum papers was dedicated to Dr. Shumacker.

After retiring as chairman in 1968, he moved his practice to St. Vincent's Hospital in Indianapolis, IN, and with a former student and resident, John Isch, MD, FACS, began what is now called CorVasc, one of the largest multihospital cardiovascular surgery groups in the country.

Dr. Shumacker retired from clinical practice, but was not ready to retire from surgery. In 1981, at age 73, he joined the faculty of the Uniformed Services University of the Health Sciences in Bethesda, MD, as professor of surgery and senior advisor. For the next decade he taught, mentored, and assisted in the development of their department and school.

It is startling to realize that someone so recently in our midst, who so many of us knew or knew of, was a charter member of the Society of University Surgeons, the Society for Vascular Surgery, the International Surgical Group, and the Chest Club. He was president of all of them, as well as the Society of Clinical Surgery and several other surgical organizations. He was an honorary member of a long list of organizations throughout the world.

In his later years, Dr. Shumacker wrote prodigiously and traveled the world to research his subjects. In his biography of John Gibbon, *A Dream of the Heart,* he describes how his friend developed the first heart-lung machine, and tells the story of his life. In *Leo Eloesser, M.D.: Eulogy for a Free Spirit,* he shows how this remarkable surgeon, another close friend, who had a passion for music and art, fought in World War I (and with the Loyalists in Spain) and, later, freed people from poverty while living in China and Latin America. He chronicles the development of heart surgery in the scholarly *The Evolution of Cardiac Surgery.* He also wrote the histories of The Society of Clinical Surgery and the Society for Vascular Surgery.

His wife of 58 years, Myrtie, whom he adored, died in 1991. He later married Grace McConnel, who survives him, along with his sons Peter and James and their families, and Mrs. McConnel's sons George and Mike McConnel and their families.

Harry Shumacker was one of the last of the great triple-threat surgeons. He excelled in caring for patients in the operating room and at the bedside, in solving clinical and basic research problems in the laboratory, and in teaching and mentoring students at all levels. The scope and complexity of each of these legs of the academic stool have expanded greatly, so surgeons in the current generation, or those to follow, will not be able to duplicate his feat. But we, and they, can emulate him by working hard, striving for perfection, pursuing humility, loving life, and occasionally going against the grain.

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