

WILLIAM MARK ARMSTRONG, MD: a conversation with the editor

W. Mark Armstrong, MD, and William C. Roberts, MD

Mark Armstrong (*Figure 1*) is the John Binion Professor of General Internal Medicine and chief of the Division of General Internal Medicine at Baylor University Medical Center (BUMC). He has held these positions since 1993. Dr. Armstrong was born in Cullman, Alabama, and grew up in Scottsboro, Alabama. He went to the University of the South in Sewanee, Tennessee, on an academic scholarship and lettered on the basketball team all 4 years. After graduating cum laude in 1968, he went to the University of Alabama School of Medicine in Birmingham, finishing in 1972. His internship in internal medicine was at the Dallas Veterans Administration (VA) Hospital, and his 2-year medical residency was at the University of Texas Southwestern Medical School and Parkland Memorial Hospital. After completion of the residency in June 1975, he came to BUMC to practice general internal medicine, and he has been here ever since.



Figure 1. Dr. Mark Armstrong during the interview.

Through the years, Dr. Armstrong has been a major teacher of the internal medicine residents, and that led to his professorship of general internal medicine and to the chiefship of the Division of General Internal Medicine. Dr. Armstrong has a large practice in medicine. He has also been very active in the American College of Physicians on both national and state levels. He is married to the former Nancy Stover, also a general internist, and they are the proud parents of two brilliant daughters. Dr. Armstrong is a wonderful guy, a splendid internist, and a devoted family man. It was a pleasure speaking with him for 2½ hours.

William Clifford Roberts, MD (hereafter, Roberts): *Dr. Armstrong, I appreciate your willingness to talk to me and therefore to the readers of BUMC Proceedings. Could we start by your talking about your upbringing, your parents, and your siblings?*

William Mark Armstrong, MD (hereafter, Armstrong): Thank you for asking me to do this. I was born in Cullman, Alabama, a small town in northeastern Alabama that was my

mother's hometown, but lived there for only about 6 months. We then moved from Cullman to Scottsboro, Alabama, my father's hometown, and lived there until I went to college (*Figure 2*). It is in very rural Alabama near the Tennessee and Georgia lines, on the Tennessee River.

Roberts: *What was the population of Scottsboro when you grew up?*

Armstrong: Between 5000 and 10,000. When von Braun came to Huntsville, only 40 miles from Scottsboro, its population surged with commuters. I enjoyed growing up in a small town. I got to know most of its inhabitants.

My mother was a high school English teacher and therefore known in the community. My father worked for the state highway department. He died when I was a junior in high school. When I was born, my mother was 38 and my father, 43. I was the third of three children. We three siblings, all boys, were very close (*Figure 3*).

My dad and I had a close relationship. I enjoyed him immensely. I spent a lot of time with him when I was small. Early, I



Figure 2. At age 2.



Figure 3. The Armstrong sluggers: Mark, Roy, and John, about 1950.

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rode with him when he worked. Later, he was very interested in our education and athletics and actively supported our school-related activities. I was also very close to my mother. All three brothers had very good relationships with our parents.

When I was young, my dad had an appendectomy with multiple complications, but after that, things were very smooth. I had pretty much an idyllic childhood with absolutely no worries whatsoever. I played sports year round: baseball in the summer, football in the fall, and basketball in the winter. Although my older brothers were 1 and 3 years ahead of me in school, we spent a lot of time together. My oldest brother was a high school band director for many years in Alabama and had great success doing that. My middle brother taught drafting in the vocational school in Scottsboro. Both of them spent their entire careers in Alabama. My middle brother never moved away; my older brother had various jobs in the state. He did come back there to live for a long time but now lives in Albertville, Alabama, which is not far away.

Roberts: *What is your mother's name?*

Armstrong: Her maiden name was Oni Algood. She was born in 1908 and died in 1988.

Roberts: *And your father?*

Armstrong: His name was George L. Armstrong. He was born in 1903 and died in 1962.

Roberts: *What did he do with the state highway department?*

Armstrong: He supervised work crews who paved county roads.

Roberts: *What was your father like?*

Armstrong: He was warm, friendly, and very family oriented.

Roberts: *Had he gone to college?*

Armstrong: Yes, for 1 year. He was a really good basketball player in high school and played basketball for 1 year in college. Because a scholarship was unavailable, he couldn't afford to stay in school and went to work.

Roberts: *That was Depression time?*

Armstrong: No. It was pre-Depression, but northeast Alabama then was very rural, undeveloped, and poor. Not until the Tennessee Valley Authority came during the Roosevelt administration did things open up in that area.

Roberts: *What was your mother like?*

Armstrong: She was outgoing, very bright, very funny, and warm. She had lots of friends, including her students and former students.

Roberts: *How far did she get in college?*

Armstrong: She went to Athens College and graduated there when she was probably only 20 years old and then began teaching in her rural home county. Later, when I was in grade school, she went to Peabody Teacher's College in Nashville and got her master's degree.

Roberts: *How did your mother and father meet?*

Armstrong: They had a whirlwind romance. While my father was working on a state highway project in Cullman, a mutual friend introduced them. They married about 6 weeks after they met.

Roberts: *How old were your parents when they married?*

Armstrong: My mom was 28, and my father, 33.

Roberts: *Did your parents have siblings?*

Armstrong: My mother was an only child, and my father was one of eight. My mother thought that that was great for her, because she married the family she never had. She enjoyed being part of the family she married into.

Roberts: *Did the other seven siblings stay in northeast Alabama, or did they scatter?*

Armstrong: They all stayed right there. The oldest sister died as a fairly young woman. It was said to be Bright's disease. Except for my father, the rest survived to live long lives.

Roberts: *When you were growing up, did your extended family get together on holidays?*

Armstrong: Yes, we went to my aunts' house, where three lived together in the house that their parents had lived in. One had never married, and two were widowed.

Roberts: *You had quite a few cousins that were about your age?*

Armstrong: No. There were only four offspring other than my two brothers and me. Although there were eight in my father's generation, there were fewer than that in the next generation.

Roberts: *And three of them were in your family.*

Armstrong: Exactly. My father was the only one who had more than one child.

Roberts: *What was your home like growing up? Was dinner at night, for example, a big deal in your home?*

Armstrong: Everyone ate at home every night, but we didn't necessarily gather at the table every night. When we were small, we probably did, but then as we got older and there was band practice (for my brother) and sports activities, we all sort of came and went. But both my parents were always home every night. We all would see each other at some point every night. The evening meal was not the big event that everyone had to be there for.

Roberts: *But it was a very close family. It sounds like your mother and father got along well.*

Armstrong: They got along great.

Roberts: *So home was a very pleasant atmosphere?*

Armstrong: Right. There was zero unpleasantness throughout my entire childhood.

Roberts: *Were there many books around the house?*

Armstrong: Because my mother was a teacher, she was interested in books. Both my parents were very interested in making sure that their children got a good education. My father realized that he could have advanced further had he gotten a college education. My mom, because she was an educator, reinforced that. We were expected to get a college education at a minimum and hopefully beyond that.

Roberts: *Did your studies come easy for you, or did you have to work very hard?*

Armstrong: Studies came pretty easy for me. Because I enjoyed it, school was not difficult or a burden.

Roberts: *How many students were in your high school in Scottsboro?*

Armstrong: Approximately 100 in my class; in the four grades (9th–12th), between 350 and 400 students.

Roberts: *Were there any teachers in grammar school, junior high, or high school who had any particular impact on you?*

Armstrong: There were several important ones in high school, the math teacher particularly. All of the teachers were friends of my mother. My mother taught my tenth-grade English class. Being the son of a teacher had its pluses and minuses. I got some special attention because I knew the teachers, but I probably got a little more scrutiny also. Both my wife and I, as we look back, think we had excellent teachers in high school, far superior to the public school teachers we see today. To be a teacher then was high achievement for a woman. There were no women lawyers, physicians, or bankers in town. If a woman had a career, teaching was it. Intelligent women then who wanted to work chose to teach.

Roberts: *You mentioned that you were active in sports. Does that mean you played on high school teams?*

Armstrong: I primarily played basketball by the time I was in high school. That was the one sport I concentrated on.

Roberts: *Were you pretty good?*

Armstrong: As a high school player, I was. I was not fast and I couldn't jump, but I could shoot very well. I did fine as a basketball player.

Roberts: *By your senior year in high school, I presume you were fully grown. How tall were you? How much did you weigh?*

Armstrong: 6'3" and 185 pounds.

Roberts: *What position did you play?*

Armstrong: Forward.

Roberts: *Did you shoot from the outside?*

Armstrong: I did. In fact, if they had had a three-point line, I would have scored a lot more.

Roberts: *Did you have a winning team?*

Armstrong: My senior-year team was very good. In February of my senior year, however, I injured my knee and was finished for the rest of that season. The team didn't advance into the tournaments. The injury ended my high school career.

Roberts: *Were there other activities in high school that you participated in? You mentioned that your brother played in the band. Did you play a musical instrument or sing?*

Armstrong: I'm singing impaired. I didn't play in the band. I took piano lessons through maybe the seventh or eighth grade, but I definitely was not a pianist.

Roberts: *Were either of your parents musically oriented?*

Armstrong: They both could sing relatively well. My mother played the piano well. All three of us took piano lessons. My oldest brother was a natural. He could play virtually any instrument and still does. He still plays in bands for clubs in northeast Alabama.

Roberts: *Was your family religious? Did you go to church every week?*

Armstrong: We went to church, but how religious we were, I'm not sure. My mother was raised in the Christian church and my father, in the Baptist church. When we moved to Scottsboro there was not a Christian church so we went to the First Baptist Church there. I went all the time. The Baptists are great at teaching about the Bible. They did a much better job than most of the other Protestant denominations in town. Nancy and I now go to Westminster Presbyterian Church.

Roberts: *Did you go on Wednesday night also?*

Armstrong: No, just Sundays.

Roberts: *What is your older brother's name?*

Armstrong: John Frank. He was born on April 20, 1943.

Roberts: *And your other brother?*

Armstrong: George Leroy. He was born on December 14, 1944.

Roberts: *And you were born on October 9, 1946. How did your mother handle working and raising three boys?*

Armstrong: She did a good job handling both. My father's older sister Lola lived with us part-time and was a surrogate grandmother. As a consequence, my mother did not have to worry about child care because her sister-in-law was always there. My aunt helped my mother tremendously.

Roberts: *Did you room with one of your brothers growing up?*

Armstrong: There were always two of us in one room. It depended on what age we were and what stage we were going through as to who roomed with whom.

Roberts: *Did your father smoke?*

Armstrong: Yes, continually.

Roberts: *Did that have something to do with his early death?*

Armstrong: No. He died of multiple myeloma.

Roberts: *How old was he when he died?*

Armstrong: He had just turned 59.

Roberts: *Did your mother smoke?*

Armstrong: Yes. Not as much as he did, but she smoked quite a bit. She finally quit. I begged, bribed, and threatened her, and she never listened. When she developed an inguinal hernia and was coming to Dallas to have an operation, I told her that if she quit smoking beforehand, her postoperative time would be better. She quit on the spot and never smoked again. She said, "I could have done it any time I wanted to."

Roberts: *Was there alcohol in your home growing up?*

Armstrong: No.

Roberts: *You went to the University of the South in Sewanee, Tennessee, to college. Who advised you about college? How did you come to that choice?*

Armstrong: I knew I'd go to college; that was a foregone conclusion. I anticipated that I would go on a basketball scholarship. I didn't think it would be a big-time basketball college, but a small college or perhaps a major university that wasn't competitive in the Southeastern Conference. Then, when I got hurt my senior year, a basketball scholarship didn't seem to be an option. The basketball coach at Sewanee, only 60 miles from Scottsboro, knew me by reputation. He had never seen me play, but he talked to my basketball coach and then came down and asked if I would be interested in going to Sewanee. I was. I had had older friends who had gone there, so I knew what it was like and I had seen its spectacular campus. I told him that I would come and I did. I never even looked anywhere else.

Roberts: *Did you have a scholarship?*

Armstrong: They didn't give athletic scholarships, but I was a Wilkins scholar, which was the premier scholarship and it was academic.

Roberts: *So you had made all A's or virtually all A's through junior high and high school.*

Armstrong: Yes.

Roberts: *Who was Wilkins?*

Armstrong: Georgia M. Wilkins was a woman who had donated funds to Sewanee for merit scholarships. The size of the scholarship was determined by need.

Roberts: *How did you do in basketball in college?*

Armstrong: I lettered for each of the 4 years (Figure 4). I didn't play a lot. I played some every year. I started some, but I never really got over the injury to my knee. I was never really as good in college as I had been in high school.



Figure 4. At Sewanee, 1966.

Roberts: *How many were on the college basketball team?*

Armstrong: Twelve.

Roberts: *How did Sewanee work out for you? Did you enjoy it? Were you glad you were there? How did your studies go? How did you decide to go into medicine?*

Armstrong: Sewanee was the best thing I could have done. It changed the direction of my life. I met people there that I would never have met had I gone to the University of Alabama or another state school. Academically, Sewanee was rigorous. It was the major life-changing event for me. I was really happy there and had lots of friends. I did well and would do it again.

Roberts: *How did you do academically in college?*

Armstrong: I graduated cum laude, but I was not an A student.

Roberts: *What does cum laude mean at Sewanee?*

Armstrong: You had to maintain a 3.0 average, and only about 15% of students achieved that, as this was before grade inflation.

Roberts: *Sewanee is a private university? Is it a college or a university?*

Armstrong: Yes, it is private. It's the University of the South, so it is a university. It's an Episcopal-affiliated university.

Roberts: *How many students were there when you were there?*

Armstrong: Probably about 800.

Roberts: *So about 200 in your class?*

Armstrong: Yes.

Roberts: *Were there teachers there who had a particular influence on you?*

Armstrong: Yes, several: an English teacher, a history professor, and an organic chemistry professor. We had excellent teachers. Sewanee prided itself on having a very good student-teacher ratio. It had a tradition that you could visit professors' homes on Sunday evenings. If they turned their light on, it meant that students could come in. Students took advantage of that. As a consequence, students got to know their professors. Professors were often in the student union. It was very informal. You knew professors reasonably well, even some you might not have taken a course from.

Roberts: *Sewanee itself is how big a town?*

Armstrong: Sewanee is actually a village; it's not even a town. The population is primarily people who are employed by the university.

Roberts: *When you entered college, were you planning to go to medical school?*

Armstrong: Yes. All the physicians in Scottsboro were family practitioners, and I thought that that was something I would be interested in doing. When I went to college, I was not required to choose a major until my junior year. I took the requisite premed courses and majored in biology.

Roberts: *As you were growing up, did you have much contact with one of the family practitioners in town? Did your knee injury sort of provide that first real look at what physicians did?*

Armstrong: When my father was ill with complications of appendicitis when I was a small child, doctors made house calls. Because it was a small town, I knew all of the doctors. When I was in the fifth grade, I had a perforated appendix, so that was another medical experience. That was the first time I was in a hospital. I knew physicians from then on. When my father became seriously ill when I was in high school, he was in a hospital in Birmingham for quite a while. He was originally diagnosed as having a back injury or lumbar disc problem. He had orthopedic surgery and neurosurgery, and it was only later that they found that it was myeloma. During that period, those who had malignant disease spent the rest of their days in the hospital, which he did. He was in the hospital continually for 3 to 4 months.

Roberts: *How far is Birmingham from Scottsboro?*

Armstrong: Ninety miles.

Roberts: *In college, who advised you about which medical school you ought to apply to, and how did you decide on the University of Alabama in Birmingham?*

Armstrong: We didn't have great advisers. I learned primarily from the students ahead of me who had gone to medical school. All of the advisers were PhDs. One biology professor was the premed adviser, but he was primarily responsible for writing the letters of recommendation. The information he had was not all that helpful. Because I was on the basketball team, I didn't have a lot of time to spend applying to medical schools. I didn't have the money to travel around either. It is not like it is today where students interview at multiple places all over the country. I narrowed my choices to Vanderbilt University, the University of Tennessee, and the University of Alabama. Those were the three close places. Students at Sewanee were considered in-state students for Tennessee. Because I was from Alabama, I was also an in-state student for Alabama. And Nashville (Vanderbilt) was not a long drive from Sewanee, and I had a lot of friends who had either applied there and/or had gone there.

Roberts: *You got in to the University of Alabama. Did you get into the other two medical schools?*

Armstrong: Yes.

Roberts: *So you got into all three of them. How did you settle on the University of Alabama at Birmingham?*

Armstrong: It basically came down to money. The University of Alabama was less expensive than the other two, and it had a good reputation.

Roberts: *You started medical school in 1968. When you first entered medical school, how many were in your class?*

Armstrong: About 100.

Roberts: *Were there any surprises for you early on in medical school?*

Armstrong: No. I knew only two other students when I started: a classmate I had grown up with in Scottsboro and someone who had attended Sewanee his freshman and sophomore years before transferring to Louisiana State University. Getting to know new students again was not really a challenge, but it was different. (When I had entered Sewanee, I knew not another soul!)

Roberts: *Birmingham was the biggest city you had ever lived in. How big was Birmingham in 1968?*

Armstrong: About 350,000. It has lost population since then.

Roberts: *But it has expanded in the suburbs.*

Armstrong: Right. It's a great town. I enjoyed it immensely. Our family had visited Birmingham on many occasions when I was growing up. Thus, I knew something about it before I went there, so it wasn't a big surprise. It was not so large that I had difficulty getting around. There was no problem in adapting to living in Birmingham.

Roberts: *Did you have an automobile by that time?*

Armstrong: Yes. My senior year in college, when I started going on interviews, was the first time that I had a car.

Roberts: *Who influenced you in medical school?*

Armstrong: The internists had the most influence on me, because that's what I wound up doing. The University of Alabama at Birmingham was a relatively young school. There had been a 2-year school in Tuscaloosa. The University of Alabama School of Medicine is probably similar in age to Southwestern. Tinsley Harrison, who was chief of medicine at Southwestern, then became chief of medicine at Birmingham when it became a 4-year school.

Roberts: *Tinsley Harrison went to the University of Alabama in about 1950.*

Armstrong: I think that's right.

Roberts: *Was he still there when you were there?*

Armstrong: He was emeritus status when I was there.

Roberts: *Was John Kirklin in surgery there?*

Armstrong: Yes. He was very influential in the school. I went to conferences that he held, but my rotation in surgery was not with him. He had a general surgery service as well as his cardiovascular service. If you were really lucky you could be on his service as a medical student, but it was the luck of the draw.

Roberts: *As you rotated through the various subspecialties in your clinical years, did you relatively quickly focus on internal medicine, or was that decision difficult for you? Did you enjoy surgery and the others, for example?*

Armstrong: I knew pretty quickly that I was not going to do surgery. I didn't enjoy it. I didn't have good hand-eye coordination. (If one is not very good at something, one probably does not enjoy it.) I liked taking care of patients, I enjoyed patient interaction a lot, so I knew I would do something clinical. My choices were internal medicine or pediatrics. I actually



Figure 5. In medical school, 1972.

considered the combination—internal medicine/pediatrics. I did not want to do family practice. Internal medicine was clearly my pick.

Roberts: *How did you come out in your medical school class of 100?*

Armstrong: I was in the top quarter of the class (Figure 5).

Roberts: *How did you decide on where to intern?*

Armstrong: When I was a senior in medical school, internal medicine was a very competitive internship/residency to get. I visited Emory, North Carolina, Duke, Virginia, and Vanderbilt. Early on in the process, however, I realized that I probably was not going to get one of those internships. My advisers kept telling me: "Oh, no, this will be fine. You've got great letters and you have got great support." In the back of my mind, I knew this probably wasn't going to happen. Sure enough, on the match day, I was in the scramble. Four of us in the class were not matched.

At that point, one has to find a spot. There were several options. Ben Friedman had been chief at the VA Hospital in McKinney and then chief at the VA Hospital in Dallas and had come to Alabama because of Tinsley Harrison. I had him for my junior internal medicine rotation, so I knew him very well. He was very demanding and a wonderful clinician. He was the kind of physician a student wanted to emulate. He spent lots of time with patients. He was also a cardiologist, and at that time cardiologists spent a lot of time talking to their patients. Dr. Friedman called Seymour Eisenberg at the Dallas VA Hospital, which had its own program at that time, and he accepted me and also my classmate, Jerry Cohen.

Roberts: *How did it work out?*

Armstrong: It was great. It was fortuitous, and I enjoyed my internship. Shortly after arriving in Dallas, the Dallas VA and Parkland Hospital residency programs merged and, as a consequence, I decided to stay in Dallas for my second- and third-year training in internal medicine rather than return to Birmingham. Dr. Eisenberg was a wonderfully warm and caring physician, and he also supported my staying with the Southwestern internal medicine residency program.

Roberts: *I presume that Seymour Eisenberg had good influence on you during your internship?*

Armstrong: He did. I thought he was a good model for a physician. My attending physicians at the VA Hospital during my internship included Jim Knochel, who later became chief at the VA and then chief at Presbyterian Hospital in Dallas, and Jack Barnett, who is the internists' internist, among others. I thought I got very good training. The Parkland residents also came to the VA Hospital even before the merger for ward rotations. I had mostly Parkland residents during my internship.

Roberts: *How did Dallas strike you? This was now by far the biggest city you had lived in.*

Armstrong: I enjoyed it. The weather was hotter and drier than Birmingham's, and there were more things to do than in Birmingham. I wasn't sure I wanted to stay in Dallas forever, but I did like it.

Roberts: *In your internship beginning in July 1972, what kind of working hours did you have?*

Armstrong: I was on call every third or fourth night. Some rotations were every third and some were every fourth.

Roberts: *When you were on call, you stayed at the hospital that night?*

Armstrong: Yes, and the next day until the work was done, which was usually by 4:00 PM. The hours were certainly different from those now. Those of us who trained then think there was better continuity of care for the patients admitted the night before. Now, for patients admitted at 4:00 AM, the interns and residents have to give up their care around noon because of the 36-hour limit.

Roberts: *How did the Parkland Hospital residency work out for you?*

Armstrong: Excellently. I spent about half of the time at the VA Hospital and half at Parkland Hospital, including both ward rotations and subspecialty rotations. Marty White was the chief of nephrology and Charlie Walker, chief of gastroenterology at the VA Hospital at the time. By the time I finished, Marty had become chief of nephrology at BUMC and Charlie Walker had joined Dan Polter at BUMC. Marvin Stone and John Fordtran came to BUMC not long after I did. At Parkland I had Jay Sanford, Charlie Mullins, Alan Pierce, and Norman Kaplan as attendings.

Roberts: *So you finished your residency in 1975. When did you come to BUMC?*

Armstrong: I finished on June 30 and I started in practice on July 1 at BUMC.

Roberts: *Who did you join in practice?*

Armstrong: I joined the Dallas Medical and Surgical Clinic.

Roberts: *Who was the leader of that at the time?*

Armstrong: Morris Magers was the senior internist there.

Roberts: *How many internists were in that group?*

Armstrong: Ten.

Roberts: *All of you were general internists?*

Armstrong: No. There was one gastroenterologist and one rheumatologist, and the rest were general internists.

Roberts: *How did you decide that you wanted to be a general internist rather than a subspecialist in internal medicine?*

Armstrong: I put off deciding anything. My wife was 2 years behind me in training, and she needed more time to finish her residency. When I got ready to finish my residency, I wasn't sure what I wanted to do. When I joined the Dallas Medical and Surgical Clinic, I thought I would find out if I liked general internal medicine or wanted to be a subspecialist. If I did not like it, I would do a fellowship. I had been offered a cardiology fellowship position at Parkland during the medical residency, but I decided that I did not want to do that.

Roberts: *You mentioned that your future wife was also a physician and 2 years behind you in training. She was in internal medicine also? How did you meet Nancy Stover?*



Figure 6. Nancy and Mark at their wedding reception, October 27, 1973.

Armstrong: We met in 1972 on ward 6D of the VA Hospital when she was my medical student. I was an intern and she was a third-year student.

Roberts: *How long did it take before you started dating?*

Armstrong: Not long.

Roberts: *What were the features of Nancy Stover that attracted you to her?*

Armstrong: She is very pretty, very smart, someone who is very easy to get to know. It was not difficult to realize that she was someone who I wanted to date and then eventually marry.

Roberts: *When did you get married?*

Armstrong: October 1973 (Figure 6).

Roberts: *You had met her in September 1972?*

Armstrong: Yes.

Roberts: *You had a 54-week courting period versus your parents' 6-week period?*

Armstrong: Correct, I was indecisive.

Roberts: *How did your joining the internal medicine group work out? I presume you felt comfortable and that's why you stayed in general internal medicine.*

Armstrong: I really enjoyed it. Then as now, the interns and medical residents do not get a good look at what a general internist does. I was just trying this out, but I liked it. I liked taking care of the patients. I liked meeting the patients. After I had been in practice for a few years, I considered going back to do a fellowship in hematology/oncology but decided not to. Once I made that decision, I knew I was going to stay in general internal medicine the rest of my career.

Roberts: *The group you're in now is what?*

Armstrong: MedProvider.

Roberts: *How many general internists are in MedProvider?*

Armstrong: Thirty.

Roberts: *You are on salary from Baylor Health Care System? Is that the situation?*

Armstrong: We're employed by HealthTexas, which is part of the Baylor Health Care System. We have a production model that determines our income.

Roberts: *It is an incentive plan?*

Armstrong: Yes. The production model has worked very well for us. There is a pretty good spread in the income depending on how hard people work.

Roberts: *What is your life like now? What time do wake up?*

Armstrong: 5:45 AM.

Roberts: *What time do you leave your house?*

Armstrong: 6:45 AM.

Roberts: *You get to BUMC at what time?*

Armstrong: Usually before 7:00 AM.

Roberts: *What do you do initially? Do you see your patients who are hospitalized?*

Armstrong: Yes. I print out my hospital list and check to see if I have had any new admissions, and then I start making hospital rounds.

Roberts: *How many patients in general do you have in the hospital?*

Armstrong: Four to five per day, sometimes more. I never have no one in the hospital.

Roberts: *You take care of your own patients who get hospitalized. The hospitalists might see them initially, but then as soon as you come in the next day, you see them.*

Armstrong: Correct. The system in place now is very good for those of us who still want to see our own hospitalized patients. The hospitalist group is superb. I feel very comfortable that they see my patients when they get admitted at night and then I pick them up the following day.

Roberts: *After rounds, you go to your office?*

Armstrong: Yes.

Roberts: *You see patients from 8:30 AM to noon, or how does it work?*

Armstrong: I usually start at 9:00 AM and I'm through at noon and then go to noon conference with housestaff. I stay at BUMC usually from noon to about 2:30 PM, when I resume office hours in my Swiss Avenue office. I see my last patient usually at 4:00 PM.

Roberts: *What time do you leave the hospital on a usual night?*

Armstrong: I probably get home between 7:00 and 8:00 PM.

Roberts: *So you work half-day, 12 or 13 hours each day.*

Armstrong: Yes, four days a week. On Wednesdays, I don't see patients in the afternoon.

Roberts: *You're off on Wednesday from 2:00 PM on.*

Armstrong: Theoretically.

Roberts: *When you get home at night at 8:00, what time do you go to bed?*

Armstrong: 11:00 PM.

Roberts: *What do you do after you get home?*

Armstrong: Talk with Nancy, read.

Roberts: *What do you like to read?*

Armstrong: I read mostly periodicals and not novels or biographies. We probably take way too many magazines: *Time*, *Newsweek*, *Atlantic Monthly*, and *Harper's*.



Figure 7. Melissa, Meredith, Nancy, and Mark at Meredith's wedding in Marfa, September 2003.

Roberts: *What is your schedule on Saturdays and Sundays?*

Armstrong: The call situation for me now is the best it has ever been. I am off most weekends. There are usually things to catch up on, oftentimes in the office. I might spend some time Saturday morning clearing off my desk and doing things that require uninterrupted time.

Roberts: *But you have to come into BUMC to "clean up"?*

Armstrong: I do now. We're changing to the electronic medical record, so maybe I will be able to do some work from home. I'm not sure how the electronic medical record is going to work.

Roberts: *What about night call, Monday through Thursday nights?*

Armstrong: I share call now with seven others. I'm on call one out of eight weeknights and one of every eight weekends. That means from Friday afternoon at 4:30 until Monday morning, I take call for myself and the other seven internists. There are four call groups among our large group.

Roberts: *How much time do you take off during a year?*

Armstrong: I take off a week to go to the American College of Physicians annual meeting in the spring. There's another shorter meeting in the fall for that. Then I take maybe 2 other full weeks off and a long weekend intermittently.

Roberts: *Do you have children?*

Armstrong: I have two daughters (Figure 7).

Roberts: *What are their names?*

Armstrong: My older daughter is Georgia Meredith, born in 1976. My other daughter is Melissa Jane, born in 1979.

Roberts: *What do they do?*

Armstrong: Meredith is married, and her married name is Niles. She is retired. She was an accomplished student—a Morehead Scholar at the University of North Carolina with three majors. At the time she graduated, the investment banking firms were recruiting heavily for graduates. Although she hadn't taken a business class in her life, she was hired by Goldman Sachs. She worked in New York for 2 years as an analyst, the entry-level position, and then worked a year in Frankfurt, Germany, and then moved to London as an associate. She has been in London ever since.

Roberts: *What does “retired” mean for her?*

Armstrong: Her husband is also an investment banker, and they were both with Goldman Sachs initially. That’s the career that he has always wanted. Meredith really did not think that that was something that she wanted to do long term. One of her goals was to make vice president, which is the next level after being an associate. Once she got that position, she decided to quit working. She got a master’s degree at London School of Economics in the history of political science. In May 2007, she had our first grandchild, a boy: William Harold Niles.

Roberts: *Are they going to stay in London?*

Armstrong: Probably. Brian changed firms and has a wonderful position with Morgan Stanley in their real estate investment area. He travels all over Europe and to some parts of Asia.

Roberts: *What about Melissa?*

Armstrong: Melissa is as brilliant as Meredith. They both went to Hockaday for high school and then Melissa went to Princeton. Then she went to Columbia for law school, where she was a Hamilton Scholar, which provides a full scholarship for law school. After graduation, she did a clerkship for the Fifth Circuit Court of Appeals in San Antonio for a year and is now a lawyer at Baker Botts in Dallas.

Roberts: *What kind of law is she doing primarily?*

Armstrong: She is in the corporate litigation section.

Roberts: *Mark, do you have hobbies?*

Armstrong: I don’t have any official hobbies. I have no retirement skills.

Roberts: *What is your house like? Where do you live?*

Armstrong: We live in Preston Hollow.

Roberts: *Are you in the same house that your daughters grew up in?*

Armstrong: We’ve only lived in two houses. It was my goal to always live inside the LBJ circumferential, so when we moved from one house when the girls were teenagers, we moved to our current house, and that’s where we continue to live. We have too much inertia to move now.

Roberts: *Does Nancy practice?*

Armstrong: She still works. She was in private practice until our second child was born. With that, it was just too difficult to have two different call schedules, so she stopped practicing but has had various jobs, sometimes full-time, sometimes part-time, since. Currently, she reviews medical records for Social Security and really enjoys that.

Roberts: *How many hours does she work now?*

Armstrong: She can work as much or as little as she wants. If she needs to be off, she can be off. She works 3 to 4 days a week and calls her own shots about what hours. She usually goes in early and then leaves early afternoon.

Roberts: *It must have been quite an honor for you in 1993 to be appointed chief of the Division of General Internal Medicine at BUMC. You’re the number 2 guy in the Department of Medicine at BUMC. That’s what that means, right?*

Armstrong: There had not been a division of general internal medicine at BUMC. On the medical board, the surgical and medical subspecialties were represented and the general internists didn’t have a seat on the medical board or on any official boards.

Dr. Fordtran, when chief of medicine, agreed that it would be a good thing to have a general internist on the medical board.

Roberts: *What kind of time commitment does that appointment entail? What are your duties?*

Armstrong: I go to the medical board meeting once a month, and quarterly there is a meeting of the general internal medicine division, and I chair that. We bring concerns to that general meeting that had been discussed at either the board level or at the medical advisory committee level. It is attended by both the general internists, who have office practices, and the hospitalists. We discuss issues pertinent to our department.

Roberts: *How much teaching do you do of the medical residents at BUMC?*

Armstrong: I see the residents daily. Often, a resident will rotate in general internal medicine in my office. I do attending rounds a couple of times a year. I go to the outpatient clinic at least once a week and attend in the internal medicine clinic there.

Roberts: *When do you do that?*

Armstrong: I go to the noon conference every day, and after the conference I interact with the residents on an informal basis. I know the residents well. If the resident is rotating with me for the outpatient rotation, we spend the rest of the time together in my office.

Roberts: *Do you take new patients anymore?*

Armstrong: If it is a cold call to the office to be a new patient, it is “no.” However, if a current patient asks me to see a family member or close friend, or if another physician calls and asks me to see someone for them (a family member, a friend, or a patient), of course I will work them in. So, yes, I still see some new patients.

Roberts: *How many patients do you need to have a full practice of general internal medicine?*

Armstrong: I would guess between 2500 and 4000 patients.

Roberts: *You see most patients at least once a year?*

Armstrong: Yes. The older they are, the more I see them. When first starting a practice, the patient population is young, and they usually do not need to be seen annually. With more time in practice, the patients get older, and then they are seen much more frequently. The older patients may need to be seen multiple times a year.

Roberts: *It seems to me that general internal medicine is about the hardest of any “specialty.” You need to know everything about everything. How do you keep up?*

Armstrong: Teaching the residents is a great way to keep up. I read journals, at least *The New England Journal of Medicine* and *Annals of Internal Medicine*. I at least have a working knowledge of what’s in each of them. And I go to meetings, always the annual scientific sessions of the American College of Physicians. I attend Baylor’s grand rounds each Tuesday.

Roberts: *When initially coming to BUMC after your residency, were you impressed by BUMC? How did it come about that you came to BUMC?*

Armstrong: Nancy was a resident at BUMC, so I knew a little bit about it through her. By reputation, I knew some about it. I knew that BUMC had a residency program and a teaching program, and that was unique for a private hospital. Methodist

Hospital and St. Paul also had teaching programs at that time. Presbyterian Hospital did later on. I thought BUMC was a place where physicians had great support from the subspecialists in internal medicine and in surgery, and radiology has always been strong at BUMC. It was much easier to get things done (ordering tests, etc.) at BUMC than it was at either Parkland or the VA Hospital. I always felt that if I needed a consultation, somebody was available with the knowledge in that particular area.

Roberts: *Talk a bit more about your Baylor professorship.*

Armstrong: The relationship that I have with the housestaff is not because I'm chief of general internal medicine but because I am the Binion Professor of Medicine at BUMC. Sometime during Dr. John Fordtran's tenure, Mr. Robert Priddy, an oil man from Wichita Falls and a patient of Dr. George Devaney, gave money to BUMC to establish a professorship in general internal medicine so that that person would have time to interact with the housestaff. That was funded for a number of years. Later, money was raised in the name of John Binion, who was a well-respected general internist at BUMC. At his retirement, money was raised by the Foundation, and now my position is the Binion Professor.

Roberts: *That was established when?*

Armstrong: Around 1990. It was initially called the Baylor Professor of Medicine because Mr. Priddy did not want any recognition. The Baylor Health Care System Foundation raised the money in John Binion's name.

Roberts: *It must be very gratifying for you to have that position and have the time to interact with the housestaff?*

Armstrong: I really do enjoy it. The most important thing I do is interact with the housestaff, try to teach them what a general internist does, and try to be a role model. I learn more from them than I teach them.

Roberts: *You made the decision in 1975 to be a general internist. Medicine was a little bit different then than it is now. How do you advise the young residents in internal medicine finishing their training now: general internal medicine versus a subspecialty in internal medicine?*

Armstrong: The residents must decide what they want to do pretty quickly because applications for fellowships are due early on. When they ask me what I think about being a general internist, I respond by saying that it is the best choice they could make. I can't imagine my doing anything else. It's not boring, and I get to interact with a large variety of patients. I have to stay abreast on a wide range of topics. I do not see the same type of patient day in and day out. I see patients with different illnesses and in different age groups. It's not a subspecialty where primarily the patients have one disease. That's why I really like it.

I still enjoy being able to take care of the patient in the continuum of care when they are in the office and when they are in the hospital. That's hard, and I understand that that probably is not going to be the model for the future. Some general internists still decide to do that. Most of the women in our group usually choose not to see their patients in the hospital, and I fully understand that, because they need to have more defined hours. It's what Nancy had to have. They are able to have a full office practice and yet be able to schedule their day so that they can

have child care and take care of things outside of medicine. The general internists now can be hospitalists. They basically have shift work, and that is a lifestyle that they choose. Whether or not all of them will stay hospitalists or decide to do something else, time will tell. It is a hard choice, because hospitalists work both day shifts and night shifts. But it does give them defined hours, and they know what their schedule is going to be.

Roberts: *What are your activities with the American College of Physicians?*

Armstrong: I'm their governor for North Texas. I've enjoyed that. I'm in my fourth year of that. That allows me to be involved with physicians at the national level. I've made good friends. I get insight into what is going on in the national scene. That has been a fun experience. Several BUMC physicians historically have been involved with the American College of Physicians, including Ralph Tompsett, Lloyd Kitchens, Marvin Stone, Al Roberts, and David Winter.

Roberts: *Mark, are you ever going to retire?*

Armstrong: I have never seriously considered it. If it were possible to slow down, I would, but that's not really possible because my patients depend on me, and unless I fire half of them, I'll continue to stay very busy. I don't have any plans to retire, provided I stay as healthy as I am now.

Roberts: *Tell me about your illness, or do you want to talk about it?*

Armstrong: I don't mind. I went to see Stuart Owen when I was 50 years old and told him I was the healthiest person alive. I had never had anything wrong with me since I had appendicitis when I was a kid. But if I didn't see him, how could I tell my own patients what they needed to do? I got a colonoscopy and a general health maintenance type of examination. At that time I exercised regularly, and the only reason I did was so I could tell my patients I did it.

Less than a year after I saw Stuart, I had a pulmonary embolus, probably iatrogenic. I had had a cerebral angiogram because of an atypical migraine and developed a thrombosed vein at the percutaneous site of the angiogram and then had a pulmonary embolus. The embolic event went undiagnosed for a while. It was a scary time for me because I didn't know what was wrong. I went for 6 or 8 weeks before the diagnosis was made and had lots of problems during that time. I got to the point where I was so breathless I couldn't dictate without stopping to take deep breaths. Once pulmonary embolism was diagnosed, I got better almost immediately and got back to where I could exercise.

Roberts: *You were anticoagulated?*

Armstrong: Yes, I've been anticoagulated ever since.

Roberts: *That's 10 years on warfarin?*

Armstrong: I took warfarin for a year. At the end of that time, Stuart and I decided that I would come off the warfarin. I was off for only about 3 weeks when I had another pulmonary embolus. Thus, I resumed warfarin and stayed on that and did well. I was able to exercise. I never missed a day of work until the winter of 2001 when my international normalized ratio got very prolonged and I had a subdural hematoma and an operation for it. After surgery when I had to be off warfarin, I had

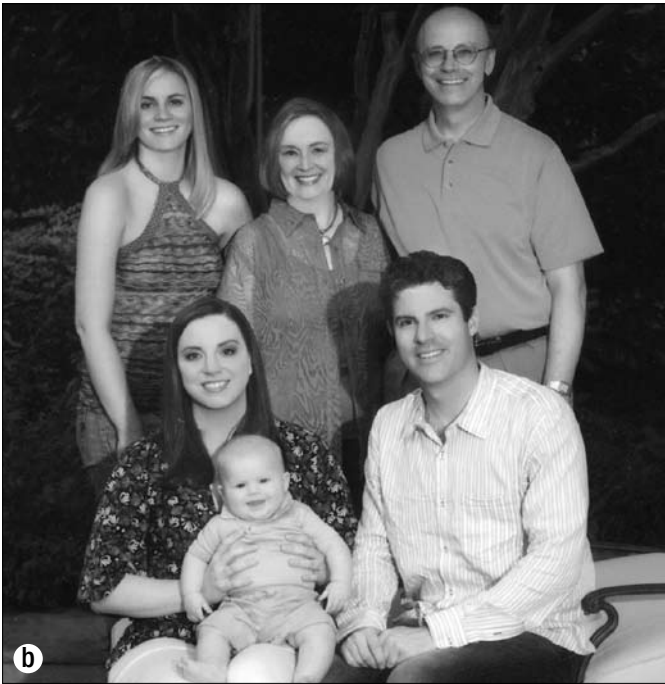


Figure 8. The Armstrong family. (a) At Thanksgiving 2006: Melissa, Meredith, Brian, Nancy, and Mark. (b) In September 2007. Standing: Melissa, Nancy, and Mark. Seated: Meredith, William, and Brian.

a vena cava filter placed. Off anticoagulation, I clotted off my vena cava. That was a disaster. I was in the hospital for probably 2 months. By the time I got out of bed, I weighed 300 pounds from the edema that I had collected. I couldn't take a step. We do not have time to describe the multiple complications during the hospital stay. Then I went back to work part-time and full-time a month after that.

Roberts: *The warfarin is keeping your vena caval filter open?*

Armstrong: No, but I have giant collaterals. My venous return is not going through the normal routes. My vena cava was occluded at the time of the clot. I'm assuming it still is.

Roberts: *So warfarin has been a blessing and a nonblessing for you?*

Armstrong: It always is. Because I had neurosurgery, I couldn't be anticoagulated for 10 to 14 days. When off anticoagulation, that's when I clotted.

Roberts: *You're okay now, as far as you know?*

Armstrong: As far as I know. I'm on the warfarin. I have chronic edema, and I can't exercise anymore. I jogged before.

I am grateful to all of the physicians who took care of me. I got excellent care. Stuart Owen saw me twice a day. Marvin Stone, David Barnett, Kent Hamilton, Andrew Fenves, Amy Wilson, Kartik Konduri, Norm Diamond and Chet Rees all collaborated to help me recover. I was on the teaching service, so the residents participated in my care. That was probably intimidating for them, but I enjoyed their participation. I also had many friends and colleagues who came regularly.

Roberts: *How much were you running a week?*

Armstrong: About 9 miles. I don't like walking nearly as much as running.

Roberts: *Your weight appears to be good. You do push-aways from the table?*

Armstrong: It's an ongoing problem.

Roberts: *What keeps you going?*

Armstrong: It has always been family. Nancy, our girls, our grandson, and our son-in-law have been the focus (Figure 8). I've participated in whatever the family is interested in. The girls had activities in high school, and I participated in whatever they were doing. That's been primarily where I have gotten all my satisfaction and enjoyment. I don't have a lot of real hobbies.

Roberts: *It sounds like both of those young women are brilliant.*

Armstrong: Yes, they are. I've always been around really bright women. My mother was very bright, and had she lived in a different era she would probably have gone to law school. Nancy is also very bright, so it makes a great relationship. We have common interests, but we don't talk about medicine much. We have a great relationship with both girls. We'd love to see both of them more than we do. With Melissa in town, it's been great.

Roberts: *London is a good way away and you don't take off a lot of time each year.*

Armstrong: Fortunately, Meredith comes to Dallas quite a bit.

Roberts: *How did you work it out as your children were coming along and you didn't get home until 7:00, 8:00, or 9:00 at night?*

Armstrong: I got home earlier when they were growing up than I do now. I'm either slower or less efficient now, but I was always there then. They had activities that kept them busy all afternoon. There were scheduled activities for them all the time. That's one of the reasons Nancy had to be available to carpool. They were always very busy. We spent some time at home in the evenings. I never helped either one of them with their homework.

Roberts: *Did you usually have dinner with them at night when they were growing up?*

Armstrong: Not necessarily. Sometimes we did, sometimes we didn't. We ate out together a lot. There was a lot of family time.

Roberts: *Thank you, Mark. I think the readers will enjoy getting to know you better. I certainly have.*

Armstrong: Thank you.