ORAL HISTORY PROJECT

Milton Markowitz, MD

Interviewed by Howard A. Pearson, MD

July 17, 1998
West Hartford, Connecticut

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PREFACE

Oral history has its roots in the sharing of stories which has occurred throughout the centuries. It is a primary source of historical data, gathering information from living individuals via recorded interviews. Outstanding pediatricians and other leaders in child health care are being interviewed as part of the Oral History Project at the Pediatric History Center of the American Academy of Pediatrics. Under the direction of the Historical Archives Advisory Committee, its purpose is to record and preserve the recollections of those who have made important contributions to the advancement of the health care of children through the collection of spoken memories and personal narrations.

This volume is the written record of one oral history interview. The reader is reminded that this is a verbatim transcript of spoken rather than written prose. It is intended to supplement other available sources of information about the individuals, organizations, institutions, and events which are discussed. The use of face-to-face interviews provides a unique opportunity to capture a firsthand, eyewitness account of events in an interactive session. Its importance lies less in the recitation of facts, names, and dates than in the interpretation of these by the speaker.

Historical Archives Advisory Committee, 1997/98

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ABOUT THE INTERVIEWER

Howard A. Pearson, MD, FAAP

Dr. Howard A. Pearson is Professor of Pediatrics at the Yale University School of Medicine in New Haven, Connecticut. He was graduated from Dartmouth College and from the Harvard Medical School in 1954. He served a rotating internship and a two-year pediatric residency at the U.S. Naval Hospital in Bethesda, Maryland. He then had a fellowship in pediatric hematology under Dr. Louis K. Diamond at the Boston Children’s Hospital. His first academic position was at the University of Florida College of Medicine in Gainesville. In 1968 he came to Yale as Professor of Pediatrics and Chief of Pediatric Hematology/Oncology. Between 1972 and 1985, he was Chairman of the Department of Pediatrics at Yale and Chief of the pediatric service at Yale-New Haven Hospital. During this time, he worked closely with Dr. Markowitz who had been appointed as the first Chairman of Pediatrics at the University of Connecticut School of Medicine. In 1991, Dr. Pearson was elected Vice President of the American Academy of Pediatrics and served as AAP President in 1992. In 1993, he was appointed to the AAP Historical Archives Advisory Committee and served as its first chairman.
Interview of Milton Markowitz, MD

DR. PEARSON: This is Dr. Howard Pearson. I’m conducting an oral history interview with Dr. Milton Markowitz at his home in West Hartford, Connecticut. The date is July 17, 1998. Mark, could you say a few words to make sure you are coming over?

DR. MARKOWITZ: In the first place, I’m honored to be included in your select group of pediatricians for an oral history for the AAP Archives, and especially to be interviewed by you because we’re friends and colleagues and have been for several decades. This also gives me an opportunity to say that when I came to the new University of Connecticut from Baltimore, as the second medical school in the state, Yale [University]--yourself and Dav [Charles Davenport] Cook--were very welcoming people and I appreciated that greatly. Our school became known as ‘the other medical school.’ When I spoke with people out of town and said I was working at a medical school in Connecticut, everyone of course thought it was Yale, quite understandably, with your two hundred-year history!

DR. PEARSON: The format is to make this informal. I have read your curriculum vitae [CV] and have read the very nice outlines of your life that your colleagues Mike [Michael A.] Gerber and John [R.] Raye put together, so I know pretty much about you. I think most of the medical world knows about you too; but in this exercise, what we’d like to do is really fill in the cracks, the personal things, the events that gave you direction, the people who impacted on you. The best way to do this is to start at the beginning. Your CV records that you were born in New York City in 1918. Could you tell me a little bit about your family, your brothers and sisters, extended family and what your family did?

DR. MARKOWITZ: I’m very pleased to. Yes, I was born in Brooklyn on June the 6th, 1918. That date became a famous day, June the 6th, D-day, and I’ll tell you about that connection in a personal way later on. This also means that a few weeks ago I was 80 years old. My folks were immigrants from Poland, the Lithuanian-Polish border. They came to this country around 1910 to get away from the oppression, and worse at times, from the pogroms against Jews in that country. They also came because they viewed America as a land of opportunity, especially for their children. They settled in New York City. My father got a job in a dusty sweatshop, of course, manufacturing or helping to manufacture ladies hats.

Within two or three years after I was born, my father unfortunately developed pulmonary tuberculosis. He was told that the treatment for tuberculosis was
fresh air, clean air, and he was sent, with the help of a Jewish social agency, to a sanitarium in the Catskill Mountains in Liberty, New York. My family followed him and moved into a small farmhouse. The family consisted of my mother, myself and my two sisters, one three years older, one three years younger. Liberty, New York was a town of 3,000 people. Later on, as I'll mention, it became a summer resort and was much busier. After my father improved, he moved into our small farmhouse with us.

During the 1920's, that area of the Catskill Mountains became a very popular resort for people, mainly Jewish people, from New York City. Since my father could not really work independently, we started to take in people as guests. It was more or less a small boarding house at that particular time. Then it evolved during the late twenties and the early thirties into a small hotel - “The Marko Manor,” as a matter of fact. This was the environment, the summer environment, where I grew up. My father was ill, as I said, and was limited in his work. I was the only son, so I did all kinds of odd jobs. One job I had which was memorable was when, at age twelve, I became the waiter for the children’s dining room. I did this for a number of years during the summers and really got to like children a great deal. I think it had something to do, perhaps a great deal to do, with my choice of a specialty later on.

We went to school in the town of Liberty, a small school with everything in one building. My only accomplishment in school besides doing reasonably well academically was as a basketball player. I starred in the so-called Four County League that we were playing in.

These were the thirties, the Depression years, of course. In addition to the Depression, we had to live off of our summer earnings for the rest of the year. Very often it turned out to be on credit until the new summer season started again. My folks scraped enough money together to be sure that I went to college. I was the first and only child in my family to go to college. I was accepted at Columbia University and Syracuse University. I chose Syracuse University because my mother had her brother’s family there and my father had his sister’s family there. Both families lived in one house and they were willing to take me in, so I had free room and board, which I desperately needed. I selected Syracuse University for that reason and was admitted.

Because of our poverty in the thirties, this was 1935 when I was admitted, I had to have a job. I got one with the NYA, National Youth Administration--a Federal Government program, mind you, to help students out. For odd jobs we got fifty cents an hour. Well, in my freshman years some of those jobs were really odd. I had to spread fertilizer on the campus, which didn’t increase my
popularity one bit! In the wintertime we had to dig a sub-basement, and that was literally ditch digging. That was the first year. Fortunately in my second year, and this was very important as I'll tell you why later, I became a laboratory assistant in the Department of Physics and I held this job for the next three years.

From the very beginning, and for as long as I can remember, I wanted to be a doctor. I'm sure that I was influenced in that direction by my father's illness. My father's illness played an overriding role in the daily life of our family. I learned from him what was good about medicine, and there were certainly some positive things and also some that were not so good. I remember when I got into medical school he implored me, "Don't you ever, ever turn a patient away who can not pay."

I went through the four years at Syracuse, and early in my senior year I began applying to medical schools. I applied to fourteen schools. The reason I applied to so many was that it was well known during the 1930's that Jews, mainly Jewish boys, had difficulty getting into medical school. It was rumored that admissions were restricted to five percent per class. Indeed at Syracuse, if you looked back a decade, which I did, we had a class of fifty and there were only three Jews in each class. That's probably why I was turned down in thirteen of the fourteen schools that I applied to. Yes, I did receive one interview but I was left in the spring of my senior year with only one possible opening and that was Syracuse University School of Medicine. As I indicated earlier, I worked as a lab assistant in the Department of Physics. I was also a physics major, by the way. A young assistant professor, a Dr. William Frederickson, was my boss and advisor and he got to know me fairly well. He kept asking me during my senior year how it was going with the applications. I'd respond by relating the increasing number of rejections that I received. Finally, in the spring of my senior year there was only one school that I had not heard from, which was Syracuse University. Dr. Frederickson took me aside and said, "I cannot tolerate this, I cannot stand for this. You know, I'm a church-going person." He was indeed a very religious man, as a matter of fact. He said he knew one professor at the medical school, the biochemistry professor, and he would go see him personally and have him, "Tell me to my face why they're not taking you with your excellent record."

I'll jump ahead for a moment because twenty-five years later the Alumni News at Syracuse carried the information that I was appointed as Chairman of the Department of Pediatrics at the new University of Connecticut Medical School. I got an exhilarated letter from Dr. Frederickson. He said he felt great, almost godlike, for what he had done for me. Frederickson is a name that will always,
always be with me.

Now I should also mention regarding my Jewish heritage that during medical school I suffered no prejudices whatsoever by anyone there on the faculty or with the other students. So this was not a problem at all once you got into medical school.

DR. PEARSON: Well, particularly someone who did as well as you did.

DR. MARKOWITZ: In any case, concerning the medical school, I really haven’t got any really positive or negative memories. We all worked hard, of course. In addition to this I had a “good job.” I was selling shoes during the weekends and I needed that job, of course, to buy my lunch. In any case, pediatrics at Syracuse in those days was a minor, minor subject comparatively and I have no very strong memories about it. The dominant clinical course was of course internal medicine and to a lesser extent, but still important, surgery. These were the chief clerkships. I was able to do well. I graduated Magna cum Laude and was elected to the honor society, the AOA [Alpha Omega Alpha].

DR. PEARSON: Is there anyone who sticks in your mind during that period of time? What was pediatrics like at Syracuse at the time?

DR. MARKOWITZ: Not much, as a matter of fact. I am trying to remember the head of Pediatrics. It was a Dr. Brewster [C.] Doust, as I recall. Six members of our 40 graduates went into pediatrics, which is a high percentage for that period.

DR. PEARSON: You applied to fourteen medical schools. How many internships?

DR. MARKOWITZ: I applied to only several internships because it was not going to be as difficult during the World War II period. I applied and was accepted at a municipal hospital in New York City, the Morrisania [City] Hospital in the Bronx.

DR. PEARSON: You had joined the Navy while still in medical school?

DR. MARKOWITZ: Yes, I did. I enlisted in the Navy and was going to go into the service as soon as it was possible to do so because of Hitler. I did not try for any deferment. At that time we were required to have at the minimum of at least an internship after graduation. And by the way, our medical school class graduated in March 1943. Our senior year was cut by three months. Internships during the war were also cut by three months, with good reason. So
I had a nine-month rotating internship in this municipal hospital. As a matter of fact, it closed not too many years after the war, and with good reason, with good reason. During my rotations there, I took a liking to pediatrics. It wasn’t a strong service. In fact many of the services weren’t strong because so many of the attending physicians were away serving in the war. So it was not at that particular time an excellent teaching hospital.

DR. PEARSON: Did it have any university affiliation?

DR. MARKOWITZ: Not that I recall. There was no affiliation with any medical school at that time.

My internship ended in December and on January the 10th, 1944, I reported to the Brooklyn Navy Yard. I was at the Brooklyn Naval Hospital for just a few days and no medical training was involved. Then they sent me out to Long Beach, Long Island, New York. There a hundred physicians, all of the same class from all the schools along the lower eastern seaboard, were gathered. The Navy was preparing us for one mission, which we didn’t realize at the time, of course, and that was the Normandy Invasion. We became aware a few months later but not at that particular time. The training at Long Beach was to learn something about Navy regulations, saluting and so on. We were all very awkward in this, of course. There was nothing to do with medicine whatsoever and also nothing to do with casualties or anything like that. Then they assigned us to our ships. I, as well as each of the other doctors, was assigned to an LST, a landing ship, tank. It was just another physician and me on one LST. We sailed up the East River and out into the Atlantic Ocean to Halifax, Nova Scotia. There about 50 LST’s gathered together and waited for our protective convoy of destroyers that would cross the Atlantic with us.

We had an interesting experience in Halifax. The doctors were all gathered together one day, and we were addressed by a captain from the Canadian Navy. He turned out to be Dr. Charles Best of [Frederick] Banting and Best fame who had discovered insulin in 1922. Most of us knew that history so we were thrilled.

Dr Best wanted us to do some research by comparing the effectiveness of three different kinds of anti-seasickness pills as we crossed the Atlantic. There was a Canadian, a British and an American anti-seasickness pill. He described the protocol and taught us to randomize. We were all excited about being able to do research. We included everyone on each of the ships in the study, and as a matter of fact, we included ourselves. Then off we went on our LST’s.
DR. PEARSON: What time of the year was this?

DR. MARKOWITZ: This was March.

DR. PEARSON: So, it was rough.

DR. MARKOWITZ: March in the North Atlantic is very rough, and shortly out of Halifax we got a first taste of what turned out to be a twenty-two day journey. LST's are about 300 feet in length. Because they have to get on to a beach eventually, the front end is very shallow. LST's go through all of the usual rocking motions that ships go through on the sea. But in addition to those, because the front end is so shallow, it smacks the waves and sets up a rolling vibration throughout the ship. So, seasickness began to happen aboard the ship very quickly. All the seamen on board were inexperienced. The only experienced person was the captain and he came from the Merchant Marines, as a matter of fact. We were running around trying to get information, the other doctor and myself, but we became quite sick ourselves. I, in fact, took all three kinds of pills and within three days it was apparent that this was going to be a shambles. We would rotate going below deck and the motion in that ship was absolutely devastating. We barely made it to where we were going, and this was true on every single one of the LST's. We had no reliable data, nothing to turn in except some sheets that were covered with vomitus! That’s all we had.

In any case, we finally arrived twenty-two days later in the Plymouth area of England. There we began our training program in earnest for the invasion. We knew then that we were part of the invasion fleet because of the training programs we went through. We lost two LST's in the training program. I was assigned to LST 301 for the invasion. The date for the invasion had been selected although it was difficult to be certain because of the weather, the date that was selected was June 5th. We started at midnight at our usual five knots and were out about three hours when we were asked to return because there was such bad weather that the landing was postponed by twenty-four hours. We had to stay aboard that ship. Our anxiety was increased because we thought that we had shown our hand about where the landing would take place, as a matter of fact.

At midnight, June 6, we started out again and learned that our sector was the Omaha Beach, one of the two American beaches. It was very rough as we sailed toward France. Unfortunately when we got close to where we were supposed to land on the beach, we could not. The reason we could not was that the beach still wasn’t secure. Any LST stuck on the beach was a sitting duck
for enemy fire and would have to wait for tides to change to get out. So, we dropped anchor about one or two miles off Omaha Beach. We had amphibious vehicles aboard and they took off and a few of them sank in the Channel. The only way for equipment to get off if we couldn’t land on the beach, was that each LST towed in its rear what was called a “rhino ferry.” This is a barge, a very flat barge, a couple of hundred square feet. If we couldn’t get to the beach, the barge would come around to the front. You would then open up your bow doors and your tanks would roll aboard the barge, which had two outboard motors.

Our “rhino ferry,” the barge, came around front and the doors opened. At the same time there was a call for a doctor. Since I was the junior physician I immediately responded. A sailor on the barge was hurt. I jumped over onto the barge, and just then it broke away from the LST. The weather was very rough at that time, especially on the flat barge and one of their outboard motors stopped working. The sailor who was injured was not seriously hurt. I had intravenous fluids and other casualty equipment I could use. We floated around the Channel for two early morning hours on that barge, just floating not knowing where we were going to wind up, as a matter of fact. We didn’t have any of our army equipment on the barge at that time, so we were anxious to keep away from Omaha Beach where all hell was breaking loose at that particular point in time. There we were just floating around when finally, an LCI, which is a landing craft, infantry, a much smaller vessel, that was coming back from the beach, saw us. They took us in tow and got us back to our LST just as it was ready to go back to England. The senior medical officer said “Where have you been?” They didn’t really know and I could have been lost forever--the “unknown sailor!”

In any case, we got back to England, reloaded and went across the channel everyday, back and forth for several weeks. Omaha Beach was secured, fortunately, after the first eight hours during which we had many, many casualties. I didn’t have to deal much with casualties because throughout the month of June, I was aboard an LST that went back and forth delivering equipment and some troops. I must add that on invasion day when we were on this barge just off the beach, the fireworks at that point you can’t imagine. I can’t even describe the noise and the fireworks that were going around all around us. There were thousands of ships there, thousands. By the way, invasion day, June 6, was my 26th birthday.

At the end of June, I was relieved of duty in Europe and was ordered to go back to the United States for reassignment. They put me on a train and I traveled the length of England up to Glasgow, Scotland. From there I boarded an entirely different ship, an aircraft carrier, as a passenger and went home. I got
back in several days. What a difference from crossing the Atlantic on an LST!

DR. PEARSON: Several days instead of twenty-two.

DR. MARKOWITZ: Yes, several days. I got back to the United States and reported to the Third Naval District in New York City.

After a few days of liberty with Selma, we decided we would get married in mid-December.

DR. PEARSON: To fill in a bit, tell me when you met Selma.

DR. MARKOWITZ: Yes, Selma and I dated at Syracuse during the last two years of her college, and my freshman and second year in medical school, and we got to like each other a great deal. She graduated before I did, and went to work in New York City as a theatrical agent and so we drifted apart. However, the last week of my internship, just before I took off for the Navy, we were reunited. We corresponded heavily. I decided when I came back--because it occurred to me that in this war you could get killed--that we would get married, and we tentatively set a date in December. I was reassigned for sort of rest and relaxation to a naval training station in Bainbridge, Maryland. I was a general duty medical officer but I had a specific job--I was the football doctor! I had to watch over the station’s football team. It was very important because each of the naval training stations were proud of their football team and indeed they recruited professional players. The players would gripe about everything, if they didn’t get steaks and so on. Quite a difference from the people I dealt with in the Normandy invasion.

Lo and behold, two days before Thanksgiving Day 1944, I got orders to report to Oceanside, California, the marine training base at Camp Pendleton, California. I was ordered to be there December the 1st. I called Selma immediately and said that our December wedding is off and told her why. I said, “I’ll be home Wednesday evening, the evening before Thanksgiving, and we’ll talk.” When I came home she said, “The wedding is on. We’re holding it on Friday in Jersey City in my home. I’ve arranged for the rabbi to be there.” I said, “Well we haven’t got anything ready, you know.” She said “We can accomplish it all on Friday, the day after Thanksgiving.”

We met that day early in the morning and went to get our Wasserman test in Jersey City where we could get the results in one hour. Then we went to the municipal building where Selma thought we could get our marriage license. This building turned out to be the municipal jail, so we then went to a nearby
building for the marriage license. The people there said, “Sorry, there is a three day waiting period in New Jersey.” I called the chaplain in the Third Naval District in New York and he said, “Don’t worry about it, come to New York City. We are marrying people all day.” So I picked up our Wasserman test reports and went to New York City with Selma and her uncle who joined us as a witness. The marriage licence bureau in New York said, “Sorry your Wassermans are from New Jersey and there is no reciprocity with New York City.” To say we were, my God, flabbergasted, is an understatement. The clerk said that I might get help if I went to the Health Department nearby in the same area and spoke with the doctor in charge of social diseases. He listened me out but said there was nothing that he could do about it. I pointed to my Navy uniform and said, “We’re both doctors, come on now.” But he shook his head. I sat there, and sat there, and sat there. Finally, he said, “Okay, I’ll turn my head and I’ll have my secretary stamp the form approved. If anything happens I’ll be able to say honestly that it was approved in error.” So off I went with my approved, negative I might add, Wassermans to the marriage bureau. I got the license and right next door there was a municipal judge intoning the marriage vows, every minute a new couple. You sat in bleacher-like seats and waited your turn. It was fast! We went in and he started and a minute later we went out another door. Then back to New Jersey. The rabbi was waiting for us in Selma’s home. We were a half an hour late, it was 3:30. Technically, I suppose, the marriage is illegal, but we’ve had 54 happy years together up to now and four children

DR. PEARSON: Great beginning.

DR. MARKOWITZ: I reported to Oceanside, California and trained with the marines on Higgins invasion boats. These are small boats, which bring troops ashore. I did that for about six weeks. Then I was assigned to an attack transport ship, the USS Colbert. These were large, converted, liberty ships used for troop transport for invasions. I was the physician in charge of forty men known as a beach battalion who go ashore during an invasion to help getting the injured back. We started out into the Pacific Ocean. The Pacific is placid, compared to the North Atlantic. We joined in exercises for the Okinawa invasion in which I participated. I went through several Japanese kamikaze attacks, which were obviously very frightening. The Okinawa invasion was successful, and it was relatively much easier, it turned out, than had been feared.

DR. PEARSON: Here you are with a nine months rotating internship practicing combat medicine.
DR. MARKOWITZ: Yes, thank God I had some good corpsmen. In any case, we got through Okinawa and then we were assigned to hang around, as it were, in the Pacific really awaiting and training for the invasion of Japan. We hopped around to many of the islands in the Pacific. For example, we were in Guam and in Guadalcanal. All kinds of violence at one time or another. The war in Europe had ended in May 1945 and we were still out in the Pacific waiting to see what would happen. Then, of course, came the atomic bomb and in August 1945, the war was over.

At the time the war ended, we were on a little island known as the Bikini Atoll, which later became the site for atomic testing. Our troop ship was next ordered to deliver occupation troops to Korea, which we did. I didn’t get onto Korean soil; there was no need for that. Then we were ordered to accompany a hospital ship that would go up north to Mukden, China. There we were to pick up our marines who had been released at the end of the war by the Russians. These were marines who were in Bataan and Corregidor and who had been sent by the Japanese for safekeeping, so to speak, to China. The hospital ship picked up the ones that were in need of medical care and we took the remaining 500 aboard our ship. We were to take them to the Philippines for processing. While we were in route with these troops, it was on September the 17th, there was a typhoon. We were ordered, with a convoy of ships, to ride out the typhoon a few miles outside of Okinawa.

DR. PEARSON: The war was over.

DR. MARKOWITZ: The war was over. Lo and behold at six o’clock in the morning of September 18, 1945, we hit a loose, floating Japanese mine which exploded in the mid-section of our ship. All the other ships scattered, but there we were, helpless and thinking we were going to sink. Fortunately, the front and the rear compartments of the ship remained watertight. The injuries we had were severe. We lost our entire engine group, the “Black Gang.” We lost them all. And then because of pieces of metal blown to top of the ship, there were several marines who were walking around the upper deck who were badly injured. One marine in particular had a piece of his head literally sliced off. The next day we were towed into Okinawa which was in shambles because of the typhoon. The physician-in-charge, Dr. Cavanaugh, ordered me, “Take this man ashore.” I said, “He’ll probably die en route. He should be kept here.” Cavanaugh said, “No, there’s too much paperwork to fill out when a man dies aboard a ship.” So I was lifted off with this very injured marine and a companion buddy of his. We were looking, literally hunting, for a place on Okinawa where there might be a hospital. As I said it was in shambles. We got an ambulance-type carrier, but he died while we were being driven. I never in
my life felt so terrible. Here was this young marine who had gone through so much. He’d gone through Bataan and Corregidor and a death march, and then he dies after the war was over!

While the ship was there without any power, dead in the water just off Okinawa, I received new orders for reassignment. I was taken by small marine plane to fly to Hawaii for reassignment. Of all places we stopped at Iwo Jima for gas. It was only momentarily, but still I can say that I was on the renowned Iwo Jima.

Fortunately, the flight was quite easy and we got to Hawaii safely. I reported to the command there and they said, “We’re assigning you to another transport because you don’t have enough points for discharge.” This was at the end of September, 1945. I was told, “We’re not sure, but we’re going to send you to Guam, because that’s where your ship may be going. You can wait for it there. So I went to a senior officer and I said, “Look I’ve just come through this terrible experience. That ship you’re talking about is probably going to get here one day, so I’ll wait here to board it.” So I literally, literally you might say, was AWOL [absent without leave] for a while.

DR. PEARSON: Your second major crime.

DR. MARKOWITZ: Yeah, the second major crime. AWOL for four weeks. I was resting, relaxing, when, lo and behold, the transport ship (APA169) came to Hawaii and I boarded it. From there we went to San Francisco. The senior doctors went ashore and we picked up another junior medical officer just out of his navy internship.

Off we went into the Pacific once again crossing back to the Philippines to pick up and bring home more troops. There were about 1,200 men aboard our ship for our trip back to the USA. We started en route for San Francisco with this other young doctor and me. I told him, “You know, we have quite a responsibility here with so many men aboard for two to three weeks. We have an operating room, but I don’t know anything about surgery.” He said, “Don’t worry, I’ve had a Navy internship and I’ve done some surgical work.” So I said “Fine, that’s fine.” We sailed along and took care of the usual things during sick calls.

Three days west of Pearl Harbor, a young seaman complained of bellyache. He had a surgical abdomen. We had an operating room, so there was nothing we could do but operate. We went to the captain to ask permission, which is routine. We gave the sailor spinal anesthesia and started operating. My colleague thought he was going to be a surgeon, so he was the surgeon and I
was his assistant. He made one of those small, little, cute “Park Avenue” incisions, the so-called McBurney incision, which makes a very small opening. Then he couldn’t find the appendix, after much probing. Finally it became apparent that it was a retrocecal appendix that had partially ruptured. Forty minutes had gone by when the spinal anesthetic ran out. The surgeon then said, “I’ll administer ether,” and went to the head of the table to get ether. He left me alone with this situation. I couldn’t get the whole appendix out and settled for getting only about half out, as a matter of fact. I had this crazy idea that I better tie sutures to the remaining appendix so they’ll know how to find it when they go back in there. I blamed the small McBurney incision, you really couldn’t see anything. So we closed him up with, as I said, with much of his appendix still inside. The other doctor and I sat up all night with him. We gave him sulfa drugs. We went to the captain and said, “You have to stop in Pearl Harbor; we’ve got to get this guy cared for.” Fortunately, the war was over. You could make route changes and he said OK.

This does not end the story. I felt that I would be court-martialed or something for this. The next day we were still about two days out of Pearl Harbor when a second lieutenant in the Army comes in and says, “I have a belly ache.” I said, “No you don’t.” He said, “Yes I do.” I examined him and, lo and behold, he clearly appeared to have appendicitis. I went to the captain again. The captain looked at me (he knew what had happened the day before) and said, “Have you given up on icebags?”

I then said to my colleague, “We have to do this. We have an operating room, technicians and you’re going to be a surgeon. You know what happened yesterday so I want you to make a good, big, right rectus incision,” which he made. The appendix practically popped out. We did the operation in nothing flat. We closed him up and we got to Pearl Harbor the next day. In any case, I took the botched appendicitis patient ashore and confessed to the Chief Surgical Officer of the Naval Hospital. He listened me out and said, “Not to worry, but you fellows have to stop doing these appendectomies. Just fill them full of sulfa and we also have a little penicillin now. I’m going to send out dispatches about this.” So I backed out quietly and went back to the ship. Our other appendix case was doing so well we didn’t have to leave him in Pearl Harbor. I asked the doctor that I spoke to at the naval hospital, to send us a message in San Francisco on how this young man was doing. We left Pearl Harbor and in six or seven days we were in San Francisco. We received a message that they had done an interim appendectomy on him and he was doing all right, so, that was good.

DR. PEARSON: Terrific. That didn’t encourage you to become a surgeon?
DR. MARKOWITZ: Well it was interesting because Dr. Jim Welch was the young navy physician who was going to be a surgeon. He wound up in Cincinnati as an anesthesiologist! In any case, by the time we reached San Francisco, I had accumulated enough points for discharge. We had to take our ship to the East Coast for decommissioning and then I would be discharged. We went through the Panama Canal and wound up in Norfolk, Virginia where we decommissioned the ship, which meant counting every aspirin and everything else. In March of 1946, I received an honorable discharge, but I remained in the Naval Reserve, as a matter of fact.

So there I was in New York City in the spring of 1946. I had made up my mind that I wanted a pediatric residency and I went around to the New York hospitals, the better ones. I was interviewed by Dr. Rusty [Rustin] MacIntosh at Babies Hospital, Columbia, and by Dr. L. Emmett Holt, Jr. at New York University, Bellevue Hospital. I was told that they both had made commitments to a number of people before they went into the service, and that these doctors were now coming back. So their residencies were filled for several years and I could not get a position with them. Now the reason I wanted to work in New York City was that my wife, Selma, had a job, a very good job. She was a theatrical agent and was the only source of our income. I had no income whatsoever, so I was looking around for some interim position.

I learned through people with whom I spoke at various hospitals, about an opening at a rheumatic fever convalescent hospital, Irvington House in Tarrytown, in Westchester County, New York. It appealed to me because they were taking care of children, and I went up and was interviewed by the physician-in-charge, Dr. Ann [G.] Kuttner. I was, you know, very inexperienced. She was running what was a research program really, and I had no research experience. My medical school was not very research-oriented.

DR. PEARSON: And the motion sickness research didn’t pan out.

DR. MARKOWITZ: Exactly right. But she employed me as an assistant physician at Irvington House and I began in April, 1946. Dr. Ann Kuttner was an interesting person: Johns Hopkins School of Medicine graduate in the early 1930's, before that a PhD from Rockefeller University. She also had been a missionary in China for a year and then finally settled at Irvington House in charge of the convalescent hospital. This was about a 90-bed institution. It was filled for the 15 months that I was there, and indeed had a waiting list. Early in the ‘40's and the years before that, rheumatic fever was a fairly common disease among young people. Much of New York City fed children and
adolescents into this hospital and indeed every large city in the north had similar institutions. Boston, for example, had the well known, I think it was called Good Samaritan Hospital. There was a similar institution outside of Philadelphia. The one in Chicago there was called La Rabida. There was one out on the West Coast as well and there may have been others. This tells you something about the frequency of rheumatic fever in the ‘30's and ‘40's because these institutions were started up in the late ‘20's and early ‘30's.

I was acting as a general physician looking after these children on the wards. Research was going on on the top floor, research on the streptococcus. There was an outbreak of streptococcal pharyngitis that was very unusual right within the institution some three years before. Penicillin prophylaxis had not yet been started at that time. The outbreak was caused by serotype 4 streptococci and involved a large number of patients, but there was not even one recurrence of active rheumatic fever. This was quite remarkable because usually recurrences occur in up to half the children following a strep infection in patients who have a history of rheumatic fever. This was quite remarkable. Dr. Kuttner's research question was to find why there were no recurrences. It turned out that serotype 4 was one of the few streptococci that has no capsule. A capsule is made up of hyaluronic acid. It was really the beginning, although it wasn’t appreciated fully then, of making distinctions between streptococcal serotypes which are so-called rheumatogenic, and those that are not. At the present time, it is an accepted concept that out of the 90 different streptococcal serotypes, there are only about a dozen or so that are known to trigger attacks of rheumatic fever. This is important information if we are going to create a streptococcal vaccine to prevent rheumatic fever. Research was done there to learn more about hyaluronic acid. I got involved with that research and even made a discovery about something called anti-hyaluronidase which occurs in the body, but I wasn’t experienced enough to work it all out.

I was exposed for the first time in my life to research and to the excitement of doing research. I was put to work to try to determine the influence of food on the absorption of oral penicillin. At that time, 1946, because of the war and the need to make penicillin en masse, there was no shortage of penicillin. There was a need to determine if we could substitute penicillin for the sulfa drugs to prevent streptococcal infections, because the original prevention studies to prevent recurrences of rheumatic fever used daily doses of a sulfa drug. But then, resistance to sulfa developed in the ‘40's.

DR. PEARSON: That early?

DR. MARKOWITZ: Yes, resistance did occur. We needed to try penicillin so
Dr. Kuttner suggested that I study the impact of food intake on the absorption of oral penicillin and found that indeed, it did reduce absorption. This study resulted in my first publication in 1947. Now during this Irvington House experience, which I enjoyed immensely, I still wanted to get formal pediatric training, but still no openings appeared in New York City. Ann Kuttner, my mentor at that point and an important one, said, “You’ll have to leave New York City.” So, Selma and I discussed it and she said, “Well if we have to, we have to. I’ll stay here and work and you go where you have to go.” And so Ann Kuttner called the Chairman of Pediatrics at Johns Hopkins, someone she knew, Dr. Francis [F.] Schwentker. He had succeeded Dr. Edwards Park. She talked to him and he said to send me down; no transcript, no letter, just a telephone call. I wondered what happened (I wondered to myself, not out loud) to the standards at Johns Hopkins, as a matter of fact! And I only learned later why he was so quick to accept me. He had an interest in streptococcal disease and rheumatic fever. He had worked at the Rockefeller, and had been in Romania to study an epidemic of scarlet fever. Also he had a local interest, which I will come to in a little while.

So, on July 1, 1947, I started my internship at the Harriet Lane Home Children’s Hospital of the Johns Hopkins Hospital. It was a wonderful experience. I spent two years of training in residency. My colleagues at that time were people that got to be well known: Barton Childs for example, John [F.] Crigler [Jr.] who went to Boston Children’s, William Zinkham, whom you know, was there, and [J.] Julian Chisolm [Jr.] who did work in lead poisoning with Dr. Harold [E.] Harrison. These were my colleagues. Among our attendings, we had one remarkable attending. His name was Dr. Lewis Thomas and he was at Hopkins during my two years. He was creative. He’d make rounds and I’ve never seen a person like him. When he started to think hard about a problem, his brain acted like a muscle, and he began to sweat. And of course the other attendings there were excellent. Lawson Wilkins was one of my attendings. The list goes on and on of people who were outstanding in their own fields.

DR. PEARSON: Before we go on, you’ve given me war stories. Tell me a little bit about your residency. What was your schedule?

DR. MARKOWITZ: Our schedule was such that we were on every other night. For a while I recall I was on every night. We had to live nearby. We were paid zero the first year and $17.00 a month for the second year. Because we were paid nothing, we could bring our wives to Sunday dinner and the hospital would clean our uniforms for us. Really. It was a very tough schedule but we accepted it as a matter of routine. And it was a fabulous experience for
me at the Harriet Lane Home.

Dr. Schwentker was interested in me because of my background at Irvington House and there was a reason for this. The reason was he didn’t like what was happening with rheumatic fever at Hopkins. Dr. Helen Taussig was in charge of pediatric cardiology. By the time I was there, she was already famous because two years before she was involved in the concept for the first “blue baby operation.” She also had taken care of the rheumatic fever patients and had done a little work in the rheumatic fever field a few years before. But Dr. Schwentker didn’t get along with her.

DR. PEARSON: She was a tough lady, wasn’t she?

DR. MARKOWITZ: She could be difficult. You have to understand her history to understand why. Here’s a person who because she is a woman was not able to get into Harvard, although her father, Professor Taussig, was a Professor of Economics there. Hopkins was known to accept women—and there is a reason for that too—so she got into Johns Hopkins. In the middle of the ‘30’s, she lost her hearing. Here was a person interested in the heart who lost her hearing. You know that these are blows, tough body blows, and she became a very possessive, defensive woman. If it doesn’t affect you personally, you have to know the history to have some sympathy for her.

In any case Dr. Schwentker wanted me to work in rheumatic fever. He wanted me to start my own clinic but Dr. Taussig said, “Absolutely no, absolutely no.” She would not abide my having a clinic. I could work in her clinic and see rheumatic fever patients, but I could not have my own clinic. It turns out that later I did get a clinic with Dr. Schwentker’s permission. In addition to the clinic, he helped me in other ways. I became in charge, as a volunteer, of a 30-bed convalescent hospital for rheumatic fever.

DR. PEARSON: By this time you’re in practice?

DR. MARKOWITZ: I’d finished my two years of residency and I did go into practice, but I’ll get to that in a moment. When Dr. Schwentker asked me to supervise the convalescent hospital, I said, “Yes, I’d be happy to look after the patients.” There were 25-30 patients at that convalescent hospital, which had the name of all things, “Happy Hills.” The other thing he said was, “We have just begun to create a board for the local heart association, the Maryland Heart Association and I’d like you to join the board,” which I did. Fifteen years later, in 1964, I was chosen to be president of the Heart Association.
In 1949 it was time for me to make a decision about going into practice. Selma and I had lived apart, just meeting over weekends after I started my Hopkins internship. By September of that first year we both looked at each other and agreed that this wasn’t going to work. She left her excellent job and moved to Baltimore in the middle of my first year of internship. Very fortunately, she found a job in television. The *Baltimore Sun* papers had started their own television station and she became a director of television programs there.

In the spring of my second year at Hopkins, it was time for us to make a decision about where I would practice. I was approached by one of the practitioners by the name of Dr. Alexander [J.] Schaffer, known to everybody as “Buck” Schaffer. He was the best-known pediatrician in the city, and well known beyond the city. He was a very imposing looking gentleman and exceedingly knowledgeable. He had graduated from Hopkins Medical School when he was about eighteen. He was a brilliant student. He had a fantastic memory, a fantastic retentive memory. He was also a great clinician, one who didn’t often depend much on all this “fancy” laboratory work to make a diagnosis.

My first experience meeting him was interesting. I was a resident on service in the nursery. A baby from his practice was born that was an infant of a diabetic mother. He came in and we looked the baby over together. Because there was some questions of a cardiac problem, an EKG was taken. Dr. Schaffer kept looking at the EKG, but he didn’t realize that he was looking at it upside down. Well I had worked in rheumatic fever and had done some studies using electrocardiograms. What was I to do? So I took the EKG in my hand and then “accidentally” dropped it on the floor. I then picked it up, right side up, and handed it back to him. That was my first contact with Dr. Schaffer, and later he invited me to go into practice with him and it was indeed quite an honor.

Dr. Schaffer had practiced solo for the previous 17 years with the exception of some time away during the war. Solo practice was the style at that time. You usually asked a friend to cover you for holidays. I was the first of his partners; the first pediatric partnership in Baltimore. It was interesting to practice with him. He was God-like to his patients, I believe with good reason, as a matter of fact, but it was tough on a junior associate. Early in our association, when I would answer the phone and if it was one of his patients, they might hang up on me. They would hang up on me. But as happens, of course you also develop a group of your own patients. Five years later when I was fairly well established, I had a sizable number of my own patients along with knowing many of his.

We went out on house calls as was the custom then. We had taken a third
person into our practice in 1954. I went out on a home visit one Monday, and
the mother said to me, “You know, I called your office yesterday. You were off
and there was another doctor, a Dr. [Anthony] Perlman taking calls. Who’s
he?” I told her that we notified families that we had taken in a third person.
Then she said, “When did you let Dr. Schaffer go?” This shows you, as a
matter of fact, what happens in these wonderful relationships you develop with
your patients which is so important and makes it so rewarding.

The practice of pediatrics at that time was very hard work, frankly, mainly
because in addition to the standard office hours, we made house calls, at least a
couple a day. A thousand a year for me was not at all unusual. At the end of
the day we often had three or four house calls. We had our practice right in the
middle of the city and therefore we had a large area to cover. We made a
commitment that once we took a family on we would see them at home if
necessary. So, house calls were standard throughout the ‘50’s, as you know,
and this was really very hard work. The practice itself was rewarding and fun.
It was mostly, of course, well child care in the office and treating infections in
the home. A parent wouldn’t think of bringing a child into the office with fever.
One has to keep in mind that transportation was different then. There were
very few two-car families, as a matter of fact. There was fear too, and the
reason there was fear is clear. There were still people around who remembered
such illnesses as double pneumonia, and also remembered that otitis meant that
a child could get mastoiditis. That’s why they didn’t bring children with fever
out of the house. We charged $7.00 for a house call no matter how far we
traveled, but that was the nature of practice at that time and indeed you learned
things in house calls. Almost always they were at the end of the day. You met
the children’s father. Often the mother would apologize about how the home
looked and I’d say, “Madam, I didn’t come to examine your habits. I came to
examine your child.” So it went. I, frankly, enjoyed the practice even including
the house calls.

Dr. Schaffer was for me a role model. He combined his very active practice
with an active role teaching at Hopkins. While at Hopkins he made rounds
regularly. He also made rounds at the hospital across the street from Hopkins,
which was the Sinai Hospital [of Baltimore]. He loved to write. I once had a
patient at Happy Hills that turned out to have hypertension and unilateral
kidney disease, and she had a nephrectomy. We used this case to review that
particular problem and I think my bibliography will show that we wrote an
article on that subject. Dr. Schaffer was in charge of the nursery at Sinai
Hospital. He was also in charge of the nursery of the Women’s Hospital of
Baltimore which was obstetrical only, and had no pediatric service whatsoever.
When I joined him, I also became active in the nurseries from time to time. I did exchange transfusions and whatever needed to be done.

We got very interested in newborns and both of us remarked more than once, “Look how little we know.” Here’s Dr. Schaffer with his background, here I am having trained in a great institution and we knew so little about sick newborns. We became unhappy with our ignorance and decided that we should do something about it. We started to collect case histories that were instructive. Dr. Schaffer was approached by [W. B.] Saunders Publishers to write an atlas. He thought about it and decided instead to write a book. He began to write a textbook in neonatology in 1955. It was the first time the word “neonatology” was used, I believe. I wasn’t an official co-author but I did write a fair amount and we had case histories throughout the book that we had gathered jointly. Lo and behold, by 1960, this gentleman, Dr. Alexander Schaffer, published a one-thousand page textbook on clinical neonatology, the first of its kind. Yes, there was a textbook on the physiology of the newborn before that.

DR. PEARSON: By Clement [Andrew] Smith?

DR. MARKOWITZ: Yes, by Clem Smith. But there was no specific clinical text and this was a clinical book. Case histories throughout, as a matter of fact. It was remarkable to do what Dr. Schaffer did while making house calls and all the rest. So I had a role model, believe me. A role model for combining academic work, which interested me, and also doing as he did, writing and practicing.

As a matter of fact, I started to do academic work, while in practice. I still maintained an interest in rheumatic fever while involved in the convalescent home. I was the one they would call when they had a rheumatic fever patient at the Harriet Lane Home and there were some 25-30 admissions a year for rheumatic fever at the Harriet Lane Home. So I kept gathering experience.

I was very much concerned with prevention of rheumatic fever and because of my interest and work with the Maryland Heart Association, I began to create clinics outside of the hospitals, clinics for prevention of recurrences. I created several with support from the local heart association in order to follow rheumatic fever patients, some of them a little far-flung in the state. I wanted to take care of them to make sure that recurrences of rheumatic fever were prevented. Going back to 1939, it was known that you could prevent recurrences by preventing streptococcal infections. Daily sulfa was used at that time. There was a study by a Hopkins’ person, Carolyn Thomas, and in New York by Al [Alvin G.] Coburn in 1939, that showed that you could do this.
So I established my clinics. Then, in 1950, there was a publication that showed prevention of first attacks of rheumatic fever by adequate treatment of the preceding streptococcal infection. This was done by the Minnesota group headed by Lewis Wannamaker. Their elegant studies showed very clearly that you could reduce the number of patients who might get rheumatic fever, if you could get to them and treat them when they had a sore throat. This approach had great appeal for me.

I started to think about it within my practice, aware of the many patients who had pharyngitis, but soon I discovered that I had difficulty making the clinical diagnosis of a strep infection. I was able to correct this by chance because of a home visit in 1951-52. That winter, I went out on a home visit to see the child of a family new to our practice who had a sore throat. The child clearly had all the clinical signs of a streptococcal sore throat. I told the mother I was going to give the child a shot of penicillin. She said to me, “Wait, aren’t you going to do a throat culture?” I was taken aback a little. I said that I could but it meant getting the culture from the hospital and delaying treatment, which I thought, would be unwise. So she allowed me to give the injection of penicillin. I asked her why she wanted a throat culture. The family had just moved from Rochester, New York and her pediatrician there was a Dr. Burt Breese and he did throat cultures in his office. Well it hit me right between the eyes because I had this interest. Dr. Breese had not published anything by then, really, so I phoned him. Well, Dr. Breese told me he constructed his own little incubator and he had got culture media together. He cultured every case of pharyngitis in his daily practice. I went to a biologic company, Baltimore Biological, told them that I wanted sheep cell agar plates and they produced them for me. I started to do routine throat cultures in my practice. I had incubators in my office and in my home, the latter because of house calls, so I could read the culture plates the next day. I did this throughout my practice years. And it spread through the city and beyond our city. I became a strong advocate of office throat cultures to confirm a diagnosis of streptococcal infections.

We started to collect data to see in what percentage of cases that I was correct in making a clinical diagnosis of strep. I started to collect information. I used old punch cards with holes on the sides, you know, to collect data. Simple things, no computer or anything. I was able to publish an article based on those findings. We also had an outbreak of streptococcal infections, of all things, at the convalescent hospital, which I described in an article in 1957. Dr. Schaffer didn’t make any income doing writing, research and teaching and he encouraged me to do the same. So he was the role model, really, for me.
Then, lo and behold, into the community came another individual named Harry [Haskin] Gordon, who in 1952 became the Chief of Pediatrics at the Sinai Hospital, and he played an important role in my life.

DR. PEARSON: Before that would you tell about how during this time while you’re in practice, you had a fair number of outside duties and responsibilities and also worked at Hopkins?

DR MARKOWITZ: Yes, indeed. While I was in practice, as I already mentioned, I was in charge of the convalescent hospital as an unpaid volunteer. I was there once a week and drew all the blood that needed to be drawn for sed [sedimentation] rates, ASO’s [antistreptolysin] and the like. I also worked in Dr. Taussig’s Clinic, two afternoons a week with rheumatic fever patients, as a matter of fact. I was the second person in our country to use the long-acting penicillin, benzathine penicillin G, to prevent recurrences of rheumatic fever. It had been tried out the year before by Dr. Gene [H.] Stollerman in New York. The people who manufactured this drug, the Wyeth Company, came down to Hopkins and they wanted to have a Hopkins’ imprimatur. Dr. Schwentker at that time wanted me to try this. Yes, and I was also a teaching attending physician at Sinai Hospital.

DR. PEARSON: It would seem to add up to half time of your time doing things other than your practice.

DR. MARKOWITZ: It was a lot of time, which is why I must say we never got very rich. We barely made a living out of our practice, but both of us, Dr. Schaffer and I, really enjoyed it, and that was the important thing. There was no bottom line stuff that you hear so much about today.

The next important person who entered my life in 1952 was Dr. Harry Gordon, who was Chairman of Pediatrics at the University of Colorado in Denver. He wanted to come east and became the head of pediatrics at the Sinai Hospital, a small twenty-bed pediatric unit across the street from Johns Hopkins.

DR. PEARSON: He had spent time at Yale, too.

DR. MARKOWITZ: Yes, he was on the Yale house staff, and Dr. Grover Powers was his idol.

DR. PEARSON: So he had a substantial academic background.

DR MARKOWITZ: Oh yes, he did indeed. He deserved to be a chairman,
which he was, but he was also a very religious man and he wanted a different environment. Lo and behold, he appeared in Baltimore. I met him for the first time while I was making rounds. The person making rounds used to give a talk to the residents. So late one afternoon I gave a talk on the prevention of rheumatic fever, both secondary prevention and primary prevention. By that time I really had it worked out nicely. Dr. Gordon asked whether I had presented this to a medical society anywhere. I said, “No, this is the first time I’ve done it.”

In any case, Dr. Gordon became my mentor, and he took a personal interest in me throughout the rest of my career. He did a lot for me. He established a laboratory for me at the new Sinai Hospital, which was built, while he was there. There was a research building, and in 1959 one of the labs was being converted into a streptococcal disease laboratory. My former teacher, Dr. Ann Kuttner was semi-retired by then and I convinced her to move to Baltimore. I applied to the NIH [National Institutes of Health] and obtained support for her. I also applied to the NIH for a research grant, which I received while I was still in practice. The results of our study were published in *JCI*, the *Journal of Clinical Investigation*, four years later in 1963.

In 1962 Dr. Gordon came to me and he said, “Look, my associate here is going to step up into my shoes and I’d like you to come on here full time.” I thought about it a great deal, because I really hated to leave my practice. One story epitomizes the significance of that attachment. It was October of 1962. I was leaving January 1, 1963 to go full-time. I had sent out notices to our families, saying that Dr. Schaffer and his other associates would continue. The mother of one of my patients called and said to me, “My God, what a terrible week. First the Cuban Missile Crisis and now you’re leaving practice!” I tried not to smile even, because she was very serious, and I think it tells you what these relationships meant to people and to their doctor as well.

So leaving practice wasn’t easy, but my mentor, Dr. Gordon, told me that I could contribute even more. This was in President Lyndon Johnson’s time of the Great Society. Federal grants were available for establishing comprehensive care clinics. After I left practice, I applied for and got a nice grant to establish a comprehensive care clinic in the inner city of Baltimore. Also I continued to teach and I was made director of the rheumatic fever clinics at Johns Hopkins. Also I was still supervising the convalescent hospital. So ended my practice period and in 1963 I started what was to be six years at the Sinai Hospital of Baltimore. I continued the combination of community health and rheumatic fever work and kept very occupied, as a matter of fact. As I mentioned before, Ann Kuttner had come to Baltimore as a visiting scientist at
Sinai Hospital and we got together to write a monograph on rheumatic fever that was published in 1965. (Markowitz M, Kuttner AG. *Rheumatic Fever: Diagnosis, Management and Prevention, A Monograph*. Philadelphia: W. B. Saunders, 1965.)

DR. PEARSON: It was a landmark.

DR. MARKOWITZ: At that particular time. In 1961, another person entered the picture that I should tell you about. At the Johns Hopkins rheumatic fever clinic there was a physician who was doing his military service for two years as a heart disease control officer for the CDC (Centers for Disease Control). After I came to Baltimore, they always assigned these individuals to work in my clinics. One such was a gentleman by the name of Dr. Leon Gordis. He started to do studies of various kinds in the field of public health as they related to rheumatic fever such as compliance with treatment and to the effect of crowding on rheumatic fever. He went on and got his doctorate in public health at Johns Hopkins using the data from our joint rheumatic fever studies, as a matter of fact. He then stayed on at the Johns Hopkins School of Public Health School, and lo and behold, he ultimately became Chairman of the Department of Epidemiology. Now he’s in the Dean’s office and is still an extraordinary person. He teaches epidemiology to medical students and they applaud at the end of his lectures. That’s very unusual for epidemiology, or for anything else for that matter. Dr. Gordis considers me his mentor. He’s done what a student should do. He outclassed his mentor and that’s fine. Also, after Dr. Kuttner passed away, Dr. Gordis co-authored the second edition of our monograph.

Well, I carried on in this way for six years in community health and I guess I should tell you a little more about that period. During these six years I continued to work for the American Heart Association as well. I became chairman of their National Council on Rheumatic Fever. They wanted to change the name when I was the head of the council in order to broaden its scope. I wrote to all the council members to ask their opinion and I got one suggestion, which was a very good one. Change it to Council on Heart Disease in the Young. The gentleman who gave me that suggestion was the well-known Dr. Paul Dudley White. I called him and thanked him. He said, “Oh, by the way, by young I mean anybody under 40.”

Anyway, I did this work for the American Heart Association and they rewarded me a few years later with their National Achievement Award. Also, I should add, to finish off that part of my story, that I was chosen to be President of the Maryland Heart Association for my various contributions. The six years full-time at Sinai Hospital were very excellent and productive years for me and
very happy ones. We had four children by 1954, all born in Baltimore. I’ll get
back to them a little bit later.

In 1968, I got a request for my curriculum vitae from the Dean at a new medical
school in Hartford, Connecticut and a request to consider applying for their
chairmanship of pediatrics. What a surprise for me! All I knew about Hartford
was that was where my insurance premiums went, nothing else. I knew nothing
about this new school, but they wanted me to come up to interview, which I did.
I was interviewed by Dean John Patterson and by Dr. James [E.] Walker, who
was the head of medicine there. I told them about my background in private
practice and in community health, and some of my academic work. In 1962, I
had received an appointment as Associate Professor at Hopkins.

At that time there was no clinical appointment track at Hopkins, and you were
either part of the mainstream appointments, or not at all. So I apparently had
done enough academic work to receive that appointment from that great
medical school.

DR. PEARSON: Do you know how Connecticut got your name?

DR MARKOWITZ: How they got my name? I found out later, and I’m not
100% certain of it but I think it’s true, from Dr. Robert [J.] Haggerty. Bob
Haggerty was a proponent of primary care, and he had asked me to come
speak at [University of] Rochester once, but I had to turn him down because I
thought that I didn’t have enough to talk about. So, I think it was Robert
Haggerty who put me on the list along with others, obviously. One other person
that I knew who was on that list was Dr. Joel [J.] Alpert.

I went up for the interview and Dr. Walker explained that they were interested
in having a person with my background in primary care and community health.
He also told me about their departmental arrangement, which I thought was
very odd. They were going to have a Department of Pediatric and Medicine
Subspecialties as a separate department as well as a Department of General
Pediatrics. This didn’t seem kosher to me, so I went home and thought about it.
I know that Joel Alpert was also very upset by this, and, as a matter of fact he
was ahead of me on the list, I do believe with good reason.

Anyway, I went home and thought about it and sent a provisional letter to
Connecticut, which was, you know, iffy, iffy, iffy. Lo and behold, some months
go by and they got after me again. I went up again and talked and listened
some more and I made up my mind that although their departmental set up
probably wasn’t going to work, I would take the job anyway. I was interested in
their primary care emphasis and I was interested in community health matters. So in January, 1969 I accepted the position as Chairman of the Department of General Pediatrics at the University of Connecticut School of Medicine.

DR. PEARSON: We are going to talk about your UConn experience, but before we get to that, how about discussing your extensive international experiences in rheumatic fever, your experiences with the World Health Organization and your multiple foreign visits.

DR. MARKOWITZ: Surely. Yes, these played a very significant role in my overall career. It really started after the monograph that was published in 1965. Because of this book, I became known in the field, not only nationally but internationally as well. I began getting invitations to various meetings, also to conferences and rheumatic fever study groups convened by the World Health Organization. I was part of several of those study groups. I also was invited to spend, often considerable, time in these countries. There was a visit for two weeks to Israel in 1967 where they had some differences of opinion with respect to the diagnosis of rheumatic heart disease. They used me to referee between two doctors, as a matter of fact.

DR. PEARSON: What were the issues?

DR. MARKOWITZ: The issues were that one physician believed that another physician was over-diagnosing functional murmurs. I was asked to mediate and did it in an interesting kind of way. Each doctor wrote down on a card what they thought the diagnosis was on a series of patients. I was in the middle and after they showed their cards, I had to go listen to the patient. They would take my word for what it was. I spent a month in Iran, in Shiraz in southern Iran, a year before the revolution, and it was an interesting month. The medical school in Shiraz invited English-speaking professors over. An Iranian individual who made a great deal of money in the United States supported this activity, as well as paying for their pure water system, as a matter of fact.

DR. PEARSON: Was Mohsen Ziai there at that time?

DR. MARKOWITZ: Mo was in Tehran and I went and met him there.

I’ve since met Mo quite recently, as a matter of fact, at some gathering. I hadn’t seen Mo in a long time. He was at Hopkins when I was there and we overlapped together. I had an interesting month in Shiraz. There already were signs that something was going to happen. We had a little indication of that from one person there, who quietly, and only when we were in his automobile,
would talk to us about politics.

Then I was invited to be the Chairman of Pediatrics for three months in Taiwan because their Chairperson had taken a leave of absence. The government invited me and paid me, as a matter of fact, as well. English was no problem over there. It was a wonderful period of three months that we had in Taiwan. That was one of my sabbaticals, the second one. The first one was in 1978. I took three months and toured seven Asian countries. I went to thirty different cities in seven Asian countries--India, Turkey, Pakistan, Sri Lanka, Indonesia, and the Philippines--and lectured to between five- and six thousand physicians on rheumatic fever. In visiting these countries, I was there to promote programs for the prevention of recurrences of rheumatic fever. It is well known and well established since 1939 that the major cause of heart disease results from recurrences in these countries. Recurrent attacks are the major cause of juvenile mitral stenosis, which was described in India many years ago, and occurs in many developing countries. These are children who within two or three years of their first attack of rheumatic fever develop mitral stenosis. We were always taught that mitral stenosis was a much delayed event in patients with rheumatic fever, occurring ten to twenty years later after an attack. Studies have shown that if you prevent recurrences after the first attack, in as many as 70 percent of patients, the mitral murmur disappears. Instead of having 30 percent with mitral stenosis as they do in some of these countries, less than 5 percent will have mitral stenosis if you prevent recurrences.

DR. PEARSON: Is there any other difference in the Third World tropical areas between rheumatic fever and streptococcal disease?

DR. MARKOWITZ: There was a time when I first began in this field that it was believed and it was written that rheumatic fever was exceedingly rare in tropical countries. As a matter of fact, Dr. Alvin Coburn from New York took advantage of this and sent a group of rheumatic children off to Puerto Rico for the winter to keep them away from the streptococcus. Well, it’s certainly not true that rheumatic fever does not occur or is rare in the tropics. Sri Lanka, which is below the southern tip of South India, has a tremendous amount of rheumatic fever and juvenile mitral stenosis. In a recent article reporting on over 2,000 patients operated on for mitral stenosis in Sri Lanka, 15 percent were under fourteen years of age, for example. Certainly rheumatic fever is not rare, and more than likely wasn’t even rare back then.

In any case, the trip that I took for three months to these seven Asian countries was an enormous experience for me and I was hopefully of some help to them. One of the things I learned, among other things, was that there were
tremendous concerns about serious allergic reactions to benzathine penicillin. When I would lecture, I would always get comments from the audience about anecdotal reports of patients who had died following an injection. It was a serious problem in terms of secondary prevention, of getting them started and keeping them on penicillin because local physicians were afraid as well.

This led to my organizing an international study in 1988 to study prospectively reactions to benzathine penicillin. I was able to recruit men and women from eleven countries whom I knew, who were directors of rheumatic fever programs, as co-investigators with me to determine prospectively the incidence of allergic reactions to benzathine penicillin in a rheumatic population, a population who had already been receiving this medication for some period of time. We enrolled some 1,800 patients who received over 32,000 injections over a period of from 6 to 24 months and the allergic reactions recorded. We found, not unexpectedly, that less than three percent had any kind of allergic reaction. Yes, there were four patients who had anaphylaxis but these were not children under twelve years of age. It’s well known that the incidence of severe drug reactions is higher in adults than in children. One of the four patients died. The four who had the anaphylaxis were patients with severe heart disease. Three of the four were in chronic heart failure and that could easily certainly have played a role as far as resuscitation is concerned. We published that study in 1991 in *Lancet* and we hope it will be used by people to help overcome this exaggerated fear of the use of penicillin in these patients. Compared to the possibility of a serious reaction, prevention of recurrences is far more important.

My experience in the international field has been very rewarding. I also had something to do with changes in the Jones criteria for diagnosis of rheumatic fever.

DR. PEARSON: I was going to ask you about Dr. [T.] Duckett Jones. He hasn’t reared his head yet today.

DR. MARKOWITZ: Dr. Jones in 1944 published a paper that presented what became known as the “Jones Criteria for the Diagnosis of Rheumatic Fever.” At that time, there was a good deal of under- and over-diagnosis going on. Jones described the manifestations of this disease and developed a set of criteria for the diagnosis. I found in my travels in the international field that the Jones Criteria did not fit well for two reasons. Even in this country, using the Jones Criteria, if you had only one major manifestation, you couldn’t diagnose rheumatic fever, as a matter of fact. In developing countries, often the first time physicians would see the patient, they would only have indolent carditis.
The rheumatic episode preceding it just went unnoticed for one reason or another. According to the Jones criteria, if you only had carditis, that wasn’t sufficient for a diagnosis of rheumatic fever. Finally after we had written about this problem, it led in 1992 to a change in the Jones criteria. Now the classical criteria to make a diagnosis are for first attacks only. The exceptions are isolated chorea and indolent carditis types of cases. For recurrences, the Jones criteria didn’t fit either because you can have much more subtle manifestations for a recurrence and still make a diagnosis of rheumatic fever. So my overall experience internationally played a role in helping nationally in this country.

Even to this day, rheumatic fever and heart disease is still an absolutely major problem in developing countries. Anywhere from a third to a half of admissions to the adult cardiology wards in developing countries are for patients with rheumatic heart disease. I will present data from developing countries at the International Pediatric Association Meeting in August, 1998 in the Netherlands. My international work has been for me a very rewarding experience.

DR. PEARSON: Let's now look inward into national aspects of your work because there have been major changes in rheumatic fever in your time.

DR. MARKOWITZ: In my time, oh yes. As I mentioned earlier, it started off with convalescent hospitals in the ‘40’s of which there were several around the country and they were all very, very busy. The incidence of rheumatic fever at that time, as studied by us and others on a population basis, just to throw a number out, was 40 per 100,000 population. That’s what it was up until about 1960. By 1980, it had dropped to 0.5 per 100,000.

DR. PEARSON: Was Dr. Gordis doing these kinds of studies with you?

DR. MARKOWITZ: Yes, I was working with Dr. Gordis and it was down to 0.5 per 100,000 in our Baltimore studies and in many of the others studies from all around our country. What were the reasons the incidence had gone down so strikingly? There were many discussions about this change and some differences of opinion. I certainly felt that the emphasis on diagnosis and treatment of streptococcal infections played a role, indeed a major role, and that was the basis of my Lewis [W.] Wannamaker Oration at the University of Minnesota in 1984 [Markowitz M. The decline of rheumatic fever: role of medical intervention. J Pediatr. 1985 Apr; 106(4):545-50.]. However, this was clearly not the only reason. Whether it was the major reason or not was not clear, but it was not the only reason. There were still a number of streptococcal infections and yet rheumatic fever had almost virtually disappeared. So,
clearly, something else was going on. Yes, living conditions, in some respects, had improved. There was a little less poverty and less crowding, and that played a role. But that wasn’t enough either, as a matter of fact.

A change that did play a role, and I think now looking back there is no question, there was a change in the virulence of the organism, and in its rheumatogenicity. We know that in infectious disease there are cycles. That a change in streptococci had occurred was proven by flare-ups, new outbreaks of rheumatic fever between 1985 and 1990 in parts of our own country. It’s now clear that these outbreaks occurred because the streptococcal rheumatogenic returned. As I said earlier, we know that certain serotypes of the streptococci have caused outbreaks of rheumatic fever. There are about ten different rheumatogenic serotypes. Serotype 5 and serotype 18 are the two most prevalent and serotype 18 was isolated during the recent outbreaks of rheumatic fever.

I still believe that the proper management of streptococcal infections played a role in the decline of rheumatic fever, not only directly by primary prevention, but also in cutting down the transmissibility of strep infections. The way you increase virulence of an organism is to keep passing it. You do that in the laboratory with animals and that also happens in humans, I’m sure. So cutting down transmissibility by treatment played a role as well. But it is probably a combination of all of these factors. Recently, there has been another report of a flare up in the Salt Lake City area, which also had an outbreak between 1985 and 1990. So, we’re not rid of rheumatic fever, not even in our own country. That’s why, right now, there is a renewed emphasis on creating a streptococcal vaccine.

I was recently asked by the NIH to review a grant application for a trial of a streptococcal vaccine in human volunteers. The molecular biology of the streptococcus, its antigens and epitopes have now been defined. So the disease is still a problem in our country, and certainly is a major worldwide health problem.

DR. PEARSON: You know, I grew up conditioned by you and Dr. Breese about the absolute necessity to include strep cultures in the practice of pediatrics to prevent rheumatic fever. Most of our residents have never seen a case of rheumatic fever and it doesn’t really ring true to them. Do you think we should continue the same degree of insistence on frequent throat cultures?

DR. MARKOWITZ: Well, I can comment on that from two points of view. In the first place, when we got almost everybody to do cultures, as we worked hard
to do, it may have been overdone. Doctors stopped making clinical distinctions whenever possible to differentiate between what could be a viral episode from what might be a streptococcal infection. Granted, it’s difficult and at times, almost impossible. But if you have a child who has red eyes and a runny nose, you should know it’s not streptococcal disease, even though he may also have pharyngitis. We don’t want such children cultured because you may pick up streptococcal carriers. Once you culture and it’s positive, you have to treat and the treatment of streptococcal carriage is very, very difficult. Penicillin will not clear them up. So we try to have physicians use their clinical skills in combination with cultures when indicated.

DR. PEARSON: Like a history and physical examination?

DR. MARKOWITZ: Yes, the combination is what we should do. There is now even more reason for trying to bacteriologically confirm a streptococcal infection because of what’s happening in terms of bacterial resistance. As you well know, the pneumococcus has increasingly become resistant to penicillin. If we continue the use of antibiotics indiscriminately, especially the broad spectrum ones, we are going to create more and more problems in terms of resistant organisms. We strongly recommend that when you suspect a streptococcal infection, you should culture. You can do a routine culture or even a rapid strep test so you can know immediately. If you have to wait for results of the culture and if the child isn’t very sick, you could withhold treatment for 24 hours. Not to treat indiscriminately is now more important than ever.

DR. PEARSON: I guess I knew somewhere about strep resistance to sulfa, but don’t you think its fairly remarkable that now in fifty years, there has not been a penicillin-resistant streptococcus?

DR. MARKOWITZ: It’s quite remarkable. It’s been studied carefully by comparing streptococci over a period of decades. Now there are publications, which suggest, even more than suggest, that penicillin is not as effective as it used to be. This is based on data stating that after a course of treatment, 20 to 30 percent of patients still have positive cultures. We looked into this carefully. We reviewed the literature using very careful criteria to select the best studies over the last forty years and published our findings in 1993. We showed that, 10-12 percent and no higher than 15 percent of patients may still be culture positive after an adequate course of treatment, and these figures have not changed over 40 years. The reasons for these so-called failures, for the most part, and certainly in the group with 30 percent failures, is that you’re dealing with many patients who are carriers to begin with. If you get a positive culture
in the first place, and a child is well after an adequate course of treatment, there is no reason to do a follow-up culture. If the child is still not feeling well you should do a follow-up culture, yes, but in such cases if the culture is positive, penicillin is not effective and never has been. The people who are suggesting that penicillin is less effective than in the past, seem to me are busy “pushing” very expensive antibiotics. There are problems because these antibiotics have a much broader spectrum, and if they are used indiscriminately, are more likely to cause resistance in organisms. Anyway, enough of that.

DR. PEARSON: Let’s get back to UConn. You’ve told me about how you took the job with ambivalence because of the job description and the separation of pediatrics into general pediatrics and pediatric subspecialties, but you took it anyway.

DR. MARKOWITZ: I did take the job and within a year or so I started to recruit. My first job in recruiting was for people who were generalists, as a matter of fact.

DR. PEARSON: You had some people already on site, too, I know.

DR. MARKOWITZ: Yes, we had Martha [L.] Lepow, who was certainly good in infectious disease but could do everything and anything.

DR. PEARSON: And well and pleasantly.

DR. MARKOWITZ: Yes, and Bob [Robert] Kramer, whom I recruited from Baltimore. Although he had special experience in behavioral pediatrics, he too was a generalist. He was a member of our practice group for several years in Baltimore, as a matter of fact.

I started in 1970 to look for people in specialties. I ran into difficulty because they weren’t going to be part of our department. They were going to be a part of the Department of Specialties, which would include both adult specialists and pediatric specialists. They argued, and I agreed, that they’d be lost as a pediatrician in that kind of an arrangement. So, I failed in my first attempts, and then lo and behold in 1971 when I told the Dean that the original plan wasn’t going to work, it was reversed, and I was asked to run a traditional Department of Pediatrics that combined specialists and generalists.

DR. PEARSON: I have wondered whether this partly was the fact that UConn, being a state school, had a primary emphasis on family practice and primary care. Is that fair?

DR. MARKOWITZ: I haven’t heard it put that way. It was primarily because
one of the earliest faculty people here, who had tremendous influence, was Dr. James Walker. He came from Boston and his work was in primary care. He felt very strongly about primary care being important in the teaching environment. He was the one that had more to do with my being hired than anybody, as a matter of fact. I have always thought it was due to the influence of this one person.

In 1971 we still did not have our own clinical institution. We were situated in the north end of Hartford, which is the poverty-stricken end of Hartford, in the McCook Hospital, which was once the municipal hospital and had been condemned and closed. We at the University of Connecticut temporarily took it over in 1970, but we found it very inadequate. By 1972, it was closed down again, as a matter of fact. We had no clinical facility of our own until 1975 when the John Dempsey Hospital opened in Farmington, Connecticut. There were temporary research buildings, Quonset huts as a matter of fact, in Farmington earlier, but we didn’t have a clinical home of our own there until 1975.

What I had in mind was a community-wide program and a community-wide residency program. There were four, I think, residency programs here when I came. One hospital that I thought shouldn’t have a pediatric program at all was the Sinai Hospital. We created a combined residency with some effort, with Hartford [Hospital], St. Francis [Hospital and Medical Center], New Britain General Hospitals and, at first, Sinai. That turned out to be much too ambitious because of the coverage schedule and the number of residents you had to recruit. It wasn’t easy to recruit a full residency staff in those years. So I had to cut my ambitious plan back to a small, but still combined, residency program, with St. Francis, Hartford and John Dempsey Hospitals. We had to drop New Britain and Sinai because they didn’t have adequate patients or programs to make them viable.

Also at that time, we were able to do some things in the community that needed to be done. For example, we discovered that there was a lot of lead poisoning in Hartford, in spite of the person in charge of the Hartford Board of Health who said “No way.” How did we discover it? We had a child admitted to the McCook Hospital who died of lead encephalopathy. We knew that this was only the tip of the iceberg. Martha Lepow started a lead-testing program. She did find a good deal of lead poisoning in the community and this was done though the efforts of our Department. Another effort was that I felt we could try to deliver medical care to inner city patients through the schools. I went to the Robert Wood Johnson [RWJ] Foundation and applied for a grant to establish a school health program for primary pediatric care in inner-city Hartford schools. We had this RWJ grant for seven years and established
clinics, first in one school and then in another school, to demonstrate that we could deliver care to this captive population in schools. Illness for them is an occupational disease, as far as I'm concerned, because a child’s chief occupation is schooling. It took a great deal to convince the Hartford school administration, as I remember. True, it was not their primary mission, but the health of a child is important in the educational process.

DR. PEARSON: Well, you were a pioneer; school based clinics are now the rage.

DR. MARKOWITZ: Yes, we were. In fact, I received an award from the Connecticut [Chapter of] American Academy of Pediatrics for my school clinic initiative. In any case, it appealed to me to be able to do things like that in this community, because I had been doing them in Baltimore, as a matter of fact. I didn’t mention it before now, but I had an adolescent pregnancy program in Baltimore.

DR. PEARSON: Again, well before its time. But in addition to these community things, you were also building an academic department of considerable strength.

DR. MARKOWITZ: Yes, absolutely. I was convinced way back when I first arrived here, that our area had a long way to go in the newborn field. I had established the first, I believe, the very first neonatal intensive care unit in Baltimore. It was clear to me from all my experience in neonatology, (after all, I had been in practice with Dr. Alexander Schaffer who wrote the first clinical neonatology text with my help!). One of the first people I recruited, before we even had our own newborn unit of any kind, was a neonatologist, Dr. John Raye. With no base of our own, he was allowed to go to New Britain General Hospital where he set up a program. Dr. Raye had a major influence in the development of first class neonatal care in our part of the state. When we opened up our neonatal unit, it was busy from the first minute, as a matter of fact.

Another area that I was very interested in getting someone was for genetics, and I did this inadvertently almost. I hired a chap who said he was a generalist but also had fellowship in genetics, Dr. Robert Greenstein. He’s very community-oriented and has developed a very fine broad genetics program here as well.

DR. PEARSON: He has become a strong link between the State Board of Health and the Medical Schools.

DR. MARKOWITZ: Yes, that’s right. From my own experiences starting in

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Baltimore, I thought there was really a lot of work to do in cancer, and so early on I was interested in getting someone in oncology.

What happened at our institution, at the John Dempsey Hospital, by the late ’70’s was that the hospital was best known in the community and in the surrounding communities for its pediatrics. It became, and I hope you’ll forgive me for the immodesty, but pediatrics became the crown jewel of the institution. Neonatology, was exceedingly well known; the oncology service under Arnie [Arnold J.] Altman; Dr. Susan Ratzan, with help from Yale, created a good diabetes program. The adult diabetologists were fighting her here, but we went forward with it anyway.

DR. PEARSON: Well, I’m glad you mentioned that because looking back it seems to me that this was a time when there was true ecumenicism between the two medical schools in the state—at least in pediatrics.

DR. MARKOWITZ: Oh yes, really. And so the Department grew and grew nicely but it was still a small department, really. There was already talk of building a children’s hospital by some people.

DR. PEARSON: Talk a little bit about that.

DR. MARKOWITZ: Well, that’s an interesting story, of sorts. My good friend, Dr. Robert [Allyn] Kramer, whom I really recruited and brought up here, was trained in an area that I was very interested in developing in the future: adolescent and behavioral medicine. He somehow, and I don’t know why, didn’t quite seem happy in the Pediatric Department. He took a job, a half-time position in the dean’s office and the other half in Pediatrics. Then when there was an opening at Sinai Hospital after Dr. Ben [Benjamin C.] Berliner left in 1973. Bob took the Sinai job. After he was there for two or three years, they were looking for a Chief of Pediatrics at Newington Children’s Hospital. When I was asked about him I said, “Yes, he certainly is a good pediatrician and administrator.” I helped him get that position.

Regrettably, within a year or so he started to move toward an independent Children’s Hospital. He was not the only one, but he played a role in that direction and talked to me about it. I said I wasn’t opposed to a specialty program at another hospital that met our requirements in terms of care and of teaching and hopefully some research but I was opposed to a Children’s Hospital, especially one that was separate from the Medical School. It wouldn’t bring the community together, I believed. Well, this didn’t sit well with the Newington people who wanted a Children’s Hospital there.
DR. PEARSON: Who also, I understand, had a big endowment.

DR. MARKOWITZ: A huge endowment. It was the selling point, of course. We talked, we had discussions, we met and we met and we met. I said, “I’m against it but if you’re going to build one, for God’s sake put it beside the University Hospital.” And they turned us down cold and acted somewhat secretly I must say about their plans. They were close to finalizing a plan, originally under the auspices of Hartford Hospital. I learned about it from the newspapers. There was no way that two specialty pediatric services could exist in Hartford, so I said, “Well, if you’re going to have it downtown, at least let’s have it community-oriented.” Well we got into that and they did have to use some of their endowment for broad child health programs. Dr. Paul [H.] Dworkin, the new Chairman of Pediatrics as of October 1, 1998, will be wonderful for developing community programs but there are still many, many problems.

DR. PEARSON: This was all happening toward the end of your term as Chair.

DR. MARKOWITZ: Yes, this was happening in the late 70’s on into the early 80’s. I was very unhappy about this. I was approaching 65 years of age and thought about resigning the Chairmanship. I knew that part of my unhappiness was because of what was happening in terms of the Children’s Hospital, so I decided to step aside.

Immediately the Dean said, “You’re now our Dean of Students.” He had a one-man search committee, himself. (I don’t know if I should put that down, but anyway, it’s true.) And so in 1983, I became in charge of medical school admissions. There’s an irony here. I mentioned the troubles that I had forty-four years before with getting into medical school.

DR. PEARSON: So you set no quotas at UConn.

DR. MARKOWITZ: No quotas. If somebody had asked me today how many of such and such, either religion, gender or color, I really wouldn’t know. I enjoyed those nine years between 1983 and 1992 enormously. I had already had, I guess, some 45 years of experience, primary care experience, academic experience; I had all that to offer. I’m very fond, very fond of young people, of course. And the students, you know, need somebody who is very interested in them personally. I enjoyed it thoroughly, as a matter of fact. It was a wonderful way to cap my career. Two years ago in 1996, the Children’s Hospital opened in Hartford. When I’m asked to do something there, I usually
limit myself to attending Grand Rounds.

My legacy? I believe, let's go back now. I’m eighty years old so I get to reflect once in a while. Looking back at the move to Connecticut, which was 29 years ago, we’ve enjoyed living in Connecticut.

Our four children, I should tell you about them. Selma gave birth to four in five years. It got so that when I kept adding new pictures in my office one parent asked, “Tell me, what parish do you live in?” So I mentioned the name of my synagogue and she went out scratching her head. Chizuk Amuno--she never heard of that parish!

DR. PEARSON: That’s a good story.

DR. MARKOWITZ: Our four children all went to public school in Baltimore. The first, my son David, went to Rochester and then the School of Public Health at Hopkins, after which he came here to our school of medicine. He went into pediatrics and is now practicing pediatrics in Kennebunkport, Maine. I see him and there are lots of changes, God knows. Not only in the HMO [health maintenance organization], insurance company area, but in the changes in pediatrics. There is a lot more of what Dr. Robert Haggerty called the “new morbidity.” So many more children are from broken families. There’s so much adolescent violence at the present time. There are drugs and smoking that are much more of a problem today, or so it seems to me. Henry Kempe had already described the battered child syndrome in my day so we were certainly aware of it but the number of abused children is far greater today. Behavioral problems like the attention deficit disorders are so common. So yes, there is a new morbidity at the present time in pediatrics in addition to all the other changes. David, my son, is my pipeline to today’s pediatrics.

Our second child, Martha went to the University of Connecticut at Storrs and then got her PhD at Boston University in child psychology. She is a very active practitioner of child psychology in the Boston area, right now treating the “new morbidity” that I just mentioned to you.

Steve, our third child went to Yale College as an undergraduate and then on to Columbia School of Medicine. How he became interested in environmental health is interesting. He was in high school here in Connecticut when we were in the lead poisoning detection business. Marty Lepow had him getting air samples in downtown Hartford to detect lead concentrations, and he winds up in environmental medicine. He’s Chairman of the Department of Environmental and Community Medicine in Queen’s College in New York City, which has a
two-year medical school but is moving along to more than that. The person who had the job before him and is there still is well known in the environmental health field, Barry Commoner. Steve is taking his place.

Our fourth child is Alice. The reason she was named Alice was that, because we had so many children so fast, when she was born we said “Das ist alles.” If you understand German, it means “that is all!” Alice went to Vassar, went on to get her masters in education at Harvard and then went overseas as a Henry Luce Foundation Fellow. She worked in Mexico, and then in Malaysia for a year. Now she’s a very independent young woman and professionally she does documentaries for public television in Boston.

We have five grandchildren. Not as many as a pediatrician would like.

DR. PEARSON: Did you encourage your boys to go into medicine?

DR. MARKOWITZ: Not by talking about it. I may have encouraged them by being who I was. No, I didn’t. I was wide open on the subject of careers and they chose for themselves.

Would I encourage young people to go to medicine today? I may have a few doubts nowadays, but still I would. Why do we go into medicine? We’re a helping profession for God’s sake, and that should never change.

DR. PEARSON: What have you been doing recently besides occasionally dropping into the Children’s Hospital in your retirement? Do you have hobbies?

DR. MARKOWITZ: These past six years now, what am I doing?

You want to know since I retired six years ago in 1992 what has kept me occupied. A number of things. I have a library full of unread books and I’ve been reading them. I read three at a time because my mood is such that if I want to do this one or that one I have the time, which I’m enjoying. My number two hobby is cooking. The lunch you had here today—I prepared the whole thing, as a matter of fact. I come by cooking, I think, genetically. My mother was the cook for our small hotel in Liberty, New York. She was a wonderful cook and did all of the cooking, all of the cooking for as many as 30 guests. So maybe that’s how I come by it. Anyway, I enjoy cooking as a hobby and it takes up a little of my time. My number three hobby is gardening. Just look out the window!

I’ve continued too, in the field of my interests in streptococcal diseases and
rheumatic fever. I continue to write and publish. In the last half dozen years, I’ve co-authored a half dozen papers in my fields of interest. I also still get invitations. Right now, I’m a consultant for a program in New Zealand, a very interesting one because of the high incidence of rheumatic fever in the native Maori population. For this population, a study has been established to detect and treat streptococcal disease in the Maori schools so that they can concentrate on this subpopulation using the school sites. Now I am in correspondence with them and there’ll be a streptococcal disease meeting in New Zealand in 1999. I hope I’m well enough to go out there again. It will be my third or fourth visit.

DR. PEARSON: See, you’re back to school health again, Mark.

DR. MARKOWITZ: Yes, a continuing combination of my school health interests and my prevention of rheumatic fever interests.

I’m also very close to people in Taiwan. I’ve been invited to be on a program there in the year 2000 that I’ve accepted. I haven’t done any work there recently, but I’ll try to be at that meeting. Currently, starting next week, I’ll be revising a chapter for Dr. Paul Dworkin’s book on general pediatrics. The medical school is kind enough to let me have an office there, secretarial help, and a fax machine. So I’m busy doing that.

DR. PEARSON: So, you’re not sitting on your hands.

DR. MARKOWITZ: No, I’m not and I’m very interested in physical exercise. Unfortunately, because of a hip replacement in 1992 there are some things that I cannot do, such as tennis as a matter of fact. So instead, I’ve become almost compulsive, and I’m not generally compulsive, about walking a mile to a mile and a half every day outdoors or in a community center or mall. I’m compulsive about that. So, I’m enjoying my retirement as a matter of fact, very much and Howard, you’ve added to that enjoyment by allowing me to review most of my life, which has been an enjoyment. I want to thank you very much for asking me to do this interview, Howard.

DR. PEARSON: I appreciate that comment Mark and the feeling is mutual. It’s been great to hear of your many accomplishments, and to share so many great stories.

I have only a few more things and then I’ll let you quit. You have described your remarkable blending of practice, academia, research and teaching. Such a combination is really, in my experience, fairly unique. Do you think someone going into pediatric practice in Baltimore or Hartford in 1998 could do what you’ve done?
DR. MARKOWITZ: Probably not because of the need today to spend so much time filling out those forms and being forced to see so many patients. But in teaching and working with people that are going into general pediatrics, I say, “Find an area of special interest. Find some area of special interest to you. You can use your own practice. You’ll get very good follow-up. Do longitudinal studies, I don’t care if we’re talking about pigeon toes, or whatever. Find an area of special interest and keep good records.” There still are areas to explore, just as I found my area fifty years ago. So that’s my advice to them. I don’t know many pediatricians who do this, but the Academy does give awards for practitioner research [Practitioner Research Award], as I remember. So there are people who are doing this sort of thing. Regarding teaching, while you’re still able to do this today there used to be more involvement of practitioners. Here in Hartford there is some practitioner involvement in teaching, but not as much I was part of in the 1950’s and ‘60’s at no less a place than at Johns Hopkins.

DR. PEARSON: Well you lived on that doorstep too.

DR. MARKOWITZ: Yes I did. I lived on the doorstep. I came from there.

DR. PEARSON: And there was a void that you filled.

DR. MARKOWITZ: I was part of the Hopkins family and it’s interesting that I worked with rheumatic fever. Harriet Lane, the woman after whom the institution was named, had two children with rheumatic fever and she contributed to the interest of the institution in rheumatic fever. But keep in mind that rheumatic fever, as I said earlier, was a major health problem during my training years. We had 25 to 30 admissions a year in the 1950’s.

DR. PEARSON: And it’s the one that got you into Hopkins.

DR. MARKOWITZ: And it’s the one that drew me to Hopkins because of my work in this area and also by chance. So much is serendipitous, as you know.

DR. PEARSON: Absolutely.

DR. MARKOWITZ: But, I’d like to stress to young people, my final word, is to discover if you can, mentors. Someone who becomes interested in you, is not worried about you competing with them at all, and is interested in your growth and development. Mentors played such an important role in my life. I would advise young people, as I did to our medical students, “What every mentor
hopes for is that his “mentee” (if there is such a word) will surpass the mentor.” Enough said.

DR. PEARSON: No, the “enough said” is that the things that have enabled you to be an effective mentor are self-confidence combined with generosity and humility. Many people just don’t have that.

DR. MARKOWITZ: Yes. Many of the things that you have said I have I’m not even conscious of, quite frankly.

DR. PEARSON: We’ll finish now and it’s been a terrific day. Thank you very much, Dr. Milton Markowitz.
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Curriculum Vita

Milton Markowitz, M.D.

Date of Birth: June 6, 1918
Birthplace: New York, NY

Undergraduate Education: Syracuse University, A.B., 1939

Graduate Training: Syracuse University College of Medicine, M.D., Magna Cum Laude, 1943

Postgraduate Training: Intern, Morrisania City Hospital, New York City, 1943-44. Research Fellow in Rheumatic Fever, Irvington House, New York, 1946-47.


Instructor in Pediatrics, The Johns Hopkins University School of Medicine, 1950-1955.
Assistant Professor in Pediatrics, The Johns Hopkins University School of Medicine, 1955-1962.
Associate Professor in Pediatrics, The Johns Hopkins University School of Medicine 1962-1969.
Director, Pediatric Rheumatic Clinics, The Johns Hopkins Children's Medical and Surgical Center, 1960-1969.
Associate Pediatrician in Chief, Sinai Hospital of Baltimore, 1963-1969.
Project Director, Family Pediatric Clinic and Druid Hill
Children and Youth Center 1966-1969.

Professor and Head, Department of Pediatrics, The University of Connecticut School of Medicine, 1969-1983.

Professor of Pediatrics and Associate Dean for Medical Student Affairs, 1983-1992.

Emeritus Professor of Pediatrics, 1992-

Societies and Honors:
- Alpha Omega Alpha Honorary Medical Society
- Fellow, American Academy of Pediatrics
- Diplomat, American Board of Pediatrics, 1949
- American Pediatric Society
- Editorial Board, Journal of Pediatrics
- Consulting Editor, W.B. Saunders Company
- Associate Member, Commission on Streptococcal and Staphylococcal Diseases, 1971-1973
- World Health Organization Consultant
- Board Member, Interamerican Society of Cardiology, 1972-1976
- President, Maryland Heart Association, 1964
- Chairman, Council for Heart Disease in the Young, American Heart Association, 1965
- T. Duckett Jones Lecturer, American Heart Association, 1969
- J.N. Barry Memorial Oration, Chandigarh, India, 1979
- A.H. Finkelstein Memorial Lecture, University of Maryland, 1981
- Hugh Dillon Memorial Lecture, University of Alabama, 1991
- Distinguished Achievement Award, American Heart Association, 1981
- Grover Powers Lecture, Yale University, 1983
- Lewis Wannamaker Lecture, University of Minnesota, 1984
- Honored as a Pediatric Pioneer, Academy of Pediatrics, 1996
- Pediatric Infectious Disease Society, Distinguished Physician Award, 1998

Publications:


Lectures and Workshops at International Sites

Milton Markowitz, M.D.
Emeritus Professor of Pediatrics

1967  Visiting Professor, two weeks Hadassah Hospital
      Jerusalem, Israel

      Pan American Health Organization Meeting
      Mexico City, Mexico

1968  Pan American Health Organization Rheumatic Fever Meeting
      Lima, Peru

1971  International Congress of Pediatrics
      Vienna, Austria

1974  International Symposium on Streptococcal Diseases
      Amsterdam, Netherlands

      Fifth World Congress Cardiology
      Buenos Aires, Argentina

1976  Tenth Congress Interamerican Cardiology
      Caracas, Venezuela

      Lectures in Hawaii, Hong Kong, Japan, Philippines, Indonesia, India

1977  Second International Meeting Preventive Cardiology
      Lisbon, Portugal

      Streptococcal Diseases and Immune Response
      Trinidad/Tobago

      Visiting Professor (one month)
      Shiraz, Iran

1978  International Symposium on Streptococcal Diseases
      Oxford, England

      Eighth World Congress of Cardiology
      Tokyo, Japan
(Satellite meeting in Ostu)

1979 Three month sabbatical for lecture tour of seven Asian countries with meetings in the following countries and cities: Turkey (Ankara, Istanbul), Pakistan (Lahore, Peshawar, Karachi, Islamabad), India (Delhi, Srinigar, Madras), Sri Lanka, Indonesia (Jakarta, Bandung, Surabya, Jogjakarta, Denpasar, Semarang), Thailand (Bangkok - 7th Asian Pacific Congress of Cardiology).

1980 Lectures in Manilla
Cebu, Iloilo, Philippines

1981 Conference on Rheumatic Fever
New Delhi, India

International Symposium on Streptococcal Diseases
Lund, Sweden

1983 Visiting Professor (three months) National Taiwan University
Teipei, Taiwan

Seventeenth International Congress of Pediatrics
Manila, Philippines

1985 WHO sponsored two week course with Dr. Stollerman
Guangzhou, China

International Symposium on Valvular Heart Disease
Manila, Philippines

1986 Eighth International Pediatric Conference
Rawalpindi, Pakistan

1987 WHO Rheumatic Fever Study Group
Geneva, Switzerland

Lecture-Strep. And Rheumatic Fever
Kingston, Jamaica

1988 Rheumatic Fever Conference
Rotorura, New Zealand

1989 Pediatric Association, Republic of China
Taipei, Taiwan

International Congress of Pediatrics
Paris, France
World Congress of Pediatrics
Bangkok, Thailand

1990 Lancefield Society Meeting
Sienna, Italy

Invited for Special Lecture
Barcelona, Spain

Argentina Pediatric Association Meeting
Buenos Aires, Argentina

Visit to review penicillin allergy study
Santiago, Chile

1991 Asian Pacific Congress of Cardiology
Seoul, Korea

1992 Symposium Group A Strep. Infections
Bali, Indonesia

1993 Interscience World Conference
Geneva, Switzerland

Lancefield Society Meeting
St. Petersburg, Russia

1994 Pediatric Rheumatology Anniversary Meeting
Buenos Aires, Argentina

Rheumatic Fever Workshop
Sao Paulo, Brazil

Asian Pacific Pediatric Cardiology Meeting
Taipei, Taiwan

1995 Rheumatic Fever Study Group
Auckland, New Zealand
Streptococcal Diseases Lecture
Guatemala City, Guatemala

Dominican Republic Cardiology Congress
Santo Domingo, Dominican Republic

1998 International Pediatrics Society
Amsterdam, Netherlands

Note: Also visits to Germany, Canada, Costa Rica, Honduras and Ecuador, cannot recall dates.