VOICE EXPEDITION INTERVIEW TRANSCRIPT
The Oral History of Nephrology
CHRISTOPHER BLAGG, MD
Interviewed by Dugan W. Maddux, MD
January 30, 2008

DWM: It is Wednesday, January 30, 2008, and today I am talking to Dr. Christopher Blagg. We are conducting this interview at the Haviland Kidney Center in Seattle, Washington. Dr. Blagg has been providing care for patients with end-stage renal disease since the 1950s and 1960s. At that time he was a pioneer in early dialysis therapy in Seattle. Throughout his career he has been an advocate for home dialysis therapies. Dr. Blagg has been very active in leadership in the renal community serving as the President of the American Society for Artificial Internal Organs and as the President of the Renal Physicians Association. He has been actively involved in the American Association of Kidney Patients and received the AAKP Medal of Excellence Award in 2000. Currently Dr. Blagg is Professor Emeritus of Medicine in the Division of Nephrology at the University of Washington in Seattle and is the Executive Director Emeritus of the Northwest Kidney Center.

Dr. Blagg, I thank you for letting me come to Seattle to talk to you about the history of nephrology. I would like to just get started with where you were born and raised. Just have a little background.

CB: Oh my goodness. I was born in Nottinghamshire, England and grew up. My father was a teacher so we moved several times where I say when people ask me I come from Pateley Bridge which is in New Yorkshire Dales where I went at the age of about 13 but I won't bother to give you a list of all the other places we went to. Then I went to medical school at University of Leeds and graduated from there in 1954, did various internships and then went in the Army because this was in the days when everybody had to go in the Army for a couple of years. I was a medical specialist in the Army. I came back to the University of Leeds and the Leeds Infirmary at the beginning of 1958 to join the Department of Medicine and they had the first active acute dialysis program in the United Kingdom. There was some dialysis right after the war but then there was a long hiatus and the University of Leeds started a program in September 1956 and I came back in January '68 and was a member of that team for a long time.

DWM: 1958? Yes.

CB: 1958 yes, and was a member of that team from there until I came to America.

DWM: I don't want to lose the train of thought but in 1958 when you were doing acute dialysis in Leeds, what machine were you using?

CB: We were using a modified Kolff rotating drum and in fact, though I wasn't involved in it, we actually modified it and the French made a further modification. We used a bigger drum than other people were using and we _____ more dialysis than other people did.

DWW: So when you had been a medical specialist in the Army and came back to Leeds Infirmary, how did you happen to get involved with acute dialysis?

CB: Well actually it's an interesting story. The program was run initially by a member of the Department of Urology and a member of the Department of Medicine. The member from the Department of Medicine was married to an American woman and at the time, almost immediately after I came back, his small son was killed riding his tricycle and so the professor sort of said, well I think the best thing you can do is go up to America for a year on sabbatical and take your wife back, it'll make it much easier for her. So I was the bottom of the totem pole in the Department of Medicine so the finger was pointed at me. Which was not my intention at all. I was planning to specialize in thyroid disease but this became a full-time occupation.

DWM: How did you learn about dialysis then when that was thrust upon you?

CB: Oh I mean it was a big going concern. I mean we used to dialyze some times for as much as 48 or more hours continuously because we would have several patients. There were only two programs in the United Kingdom at that time. Ours basically took all the patients from the north of England through Scotland and Northern Ireland and then there was a program in London that took the south end so we were busy most of the time. We didn't have a technician initially, we did everything ourselves.

DWM: So when you say you did everything yourselves.

CB: _____

DWM: You were setting up dialyzers, you were setting up membranes.

CB: We set up the machine. We had to sterilize the membrane and just do everything. It was going right into the deep end and it was very interesting. I enjoyed it so here I am now all the years later.

DWM: All these years. The patients in 1958 that you were doing acute dialysis on, what would have been the diagnosis for most of them?

CB: Three main ones would be; these were basically all acute renal failures and I will come back to chronic renal failure in a moment. Traumatic injuries, postsurgical trauma and at that stage in time, abortions and postpartum bleeding with renal failure. Those were the three main ones.

We also did treat some patients with chronic disease when we didn't know it was chronic and then we would biopsy them and if they had chronic disease we would just stop dialysis. Those were the main three categories. We also had other odd interesting things but those were it.

DWM: So you start dialysis there and you liked it in 1958.

CB: Well it was very interesting. I mean it was all new. I mean, as I say, the powers that be, well of course there weren't nephrologists in those days, there wasn't such a thing but the powers that be in general didn't care for dialysis at all. They thought it was a rather dirty thing that you know real scientists didn't get involved with – both here in the United States as well as in Britain. Actually the Medical Research Council in Britain, which is a bit like the NIH, actually supported the program that we had which was a big help. It was very interesting and then when Dr. Scribner reported on the shunt we had already tried shunting the cannulas but these were the acutes and it didn't work because we hadn't got Teflon and we had to give the patients heparin and they either bled or else they clotted so we gave that up because even with the acutes when we had to dialyzed them maybe every other day it would've been very helpful if we could have, instead of having to cut down every time, but we had to cut down every time. So, I guess late 1960 or early 1961 we actually got the equipment for making Teflon shunts from Seattle and we treated two patients. One of them died miserably very early on and the second one lived for about five or six weeks. Somewhere I still have an alarm clock he gave me because he actually went away for two days to the seaside and came back with an alarm clock for me but he died too. I mean we didn't know what we were doing and with a busy acute program we just decided this is not something we can do – we've got to just look after the acutes. In those days, in Britain, you had to come to America. We used to call it the BTA – been to America. If you are in academic medicine you had to go and go through America.

DWM: The BTA.

CB: Because I was interested in what Scrib was doing and so on, I asked to go to fellowship, which was actually paid for by the National Institutes of Health, but I got it through the Medical Research Council. I only really knew two people in the U.S. who were interested in dialysis at that point because my only connections were through the proceedings of the American Society of Artificial Internal Organs. I only knew of Dr. Schreiner in Washington, D.C. and Dr. Scribner in Seattle and I didn't know which way to go but I was advised by an American surgeon, who was visiting and was a friend of mine, and he said, if the NIH is going to pay you, I think it was nine cents a mile, to where ever you go to, why don't you apply to Seattle first because you are going to want to go to the West Coast and visit anyway and if you get into there you've got all that time to come back and other visit places so that's why I came to Seattle.

DWM: Funny how decisions are made.

CB: That's right. That's right.

DWM: So what year would this have been that you came to Seattle?

CB: I came in '63 and I was here for 16 months and then had to go back to Britain because I had the wrong sort of visa, you know, I had a visitor's visa so I had to stay in Britain for two years. I came back to the U.S. once, I guess early '66 to a meeting and went around the country. I mean we were a very small group of people in those days who knew anything about dialysis so I went around and there were several places I could have come back to but then Dr. Scribner came to visit us, he invited me to come back and I came back. So I have been here permanently since 1966.

DWM: Since 1966. So when you came in 1963 and came to Seattle, what was happening here? Were you happy with what you saw, what was new?

CB: Oh yes, I mean it was all different and it was a wonderful department to work in. By that point we had the Seattle Artificial Kidney Center, which is now Northwest Kidney Centers and that started January 1, 1962. So that was up and running and had a small number of patients. This was before the NBC documentary that you saw, I think that was '65, I think if I remember correctly.

DWM: It was – yes.

CB: So there were a small number of patients there and the university hospital where I was based we had the three original patients and by that point of time we had a pediatric patient who was, as far as I know, the first long-term pediatric patient on dialysis. We were just learning the whole time; I mean it was just different so to speak.

DWM: What machines and dialyzers were you using?

CB: At that point we were using Kiil dialyzers. You see originally in Seattle Dr. Scribner used Skeggs-Leonards dialyzers which were flat plate dialyzers and when he was in Europe in 1961, I think, in Denmark he saw the Kiil dialyzer. The Kiil dialyzer was a big board flat plate dialyzer which had originally been Fred Kiil who devised it originally intended as a blood oxygenator but he thought it would be good for dialysis so he told me he brought it back on one of the earliest Pan Am polar flights to Seattle and was very discouraged because when he got to the customs in Seattle the plates had a rubber gasket around them and, I mean I don't know if this is true, but he told me that the customs insisted on cutting all these gaskets open to make sure there weren't any strange white powders or anything in them. I mean it is a bizarre story but that's what he told me anyway. So we used flat plate dialyzers. At the university hospital we were using – well let's back up a minute. The original dialysis with the Skeggs-Leonards was done using cool dialysate and using a Sears Roebuck deep freeze to keep the dialysate cool so it didn't grow bacteria. Somewhere in the '61 or '62 era, there was a Seattle company called

Sweden Freezer which made soft ice cream and they built us a tank, it was before my day, but they built a tank machine so we had this large volume of fluid in there and it was kept cool. It went through the dialyzer and the patient's blood obviously got cooled while it was in contact with this cool dialysate then there was a re-warmer on the end to warm the blood before it went back in the patient. It was a great huge thing. We had a laboratory in the bottom of the hospital where they used to make these things. The dialysate was mixed in the tank. I don't know whether they still have it but we used to have a wooden canoe paddle, which was used for stirring up the 300 odd liters of dialysate that was put in the tank.

DWM: That doesn't sound very sterile – that wooden...

CB: I mean it doesn't matter; the dialysate doesn't need to be sterile.

DWM: Because of your membrane?

CB: Because you've got the membrane there. I mean you don't want it growing bacteria but it doesn't need to be absolutely sterile. In fact, we knew very little about things like that in Seattle. We knew that, a friend of mine who was a bacteriologist at the time, they did one experiment using normal temperature dialysate and John told Scrib that he couldn't grow bacteria as fast even in the lab on agar as we could grow it in the tank. So we didn't do that experiment again.

DWM: Did you just not want to know?

CB: Well I mean it was all hit or miss in those days. Dr. Scribner, I think, was just a wonderful person. I think he and Dr. Kolff should have got the Nobel Prize but for various reasons they didn't.

DWM: Yes.

CB: So we were using Kiil dialyzers and we used a Sweden Freezer tank. The Kidney Center at that point was also using a tank and there was also a device that was made by one of the patients, who was an engineer, which never really came to anything very much. From that the transition was to a machine called the Drake-Willock that was made in Oregon and that must have been about '65 I think when the transition occurred. It was a very ingenious machine that worked beautifully actually and we used it for quite a number of years until sometime in the 60s. We used Kiil dialyzers until disposable dialyzers came along in the 70s. There was a lot of competition, if you like, during those early days because Dr. Kolff and his group had developed the coil dialyzer, the twin coil dialyzer so they were dialyzing a shorter time than us. We'll come back to time in a moment with the home dialysis. But we didn't think patients did as well with the coil and we stayed with the Kiil. The original dialysis back in 1960, for the first three or four months, was 24 hours or more once a week or once every five to seven days, but patients

would start to get sick the day before that so then we changed to twice a week; 16 to 24 hours twice a week and that persisted for some time. For example, in the NBC documentary they come in in the afternoon and go out the next morning and doing it twice a week. As you saw, they looked well; they went to work and so on. They actually got more dialysis than people get in most centers in this country right now at sort of 3.5 or 4 hours three times a week in the center and at home. When we started the home program, by that time, this was '64. Well I don't know; do you know the genesis of our home program?

DWM: No. Start at the beginning and tell me how it happened.

CB: Well, this is all very confusing and mixed up; you're going to have to edit it. Just about the time I arrived in 1963, Dr. Les Babb who was a professor of nuclear engineering; we had an atomic reactor on the campus, who ran the reactor met up with Dr. Scribner. They liked each other and were interested so it was agreed that we would have joint meetings. They were going to tell us all about fluid going around tubes and things and we were going to tell them all about dialysis. Well they took one look at what we were doing with these big tanks and so on and said, that's stupid. So they made a big machine, which we called the monster, which we put in our clinical research center to treat these original four patients. It was the first machine to use proportioning pumps to make dialysate directly for dialysis and it worked beautifully. I mean, it made enough for the four patients and they dialyzed. But shortly after that got done, a friend of Les Babb's, I think he was a representative for some manufacturer but not in the dialysis business. Anyway, a friend of Les Babb's daughter who was 15 years old developed renal failure from, she had lupus, and the Kidney Center was still at this stage very tight as to who could come – you had to be 18 and I think by that time we got to an upper limit of 50, but anyway she was not accepted by the Kidney Center so Les Babb and his engineers put together and made a single-patient version of this and that's the basis of just about every machine that is used in the world today because it was the first proportioned pump single-patient machine with monitors and everything else designed for patient use.

DWM: To allow this child to dialyze at home – yes.

CB: That's right, at home. At that point in time, '63 or '64, some patients were dialyzing twice a week for long hours that we talked about. For the home patients, which started, I think Karen_ must have gone home about July or August of '64, and we had several other home patients during the course of the next several months. There were four, I think, by the end of the year. The original idea was that they would dialyze six to eight hours twice a week, which rapidly changed to three times a week because it wasn't enough dialysis for them. It was a great nuisance obviously to have to come home in the afternoon and dialyze, you know, during the late afternoon and evening so what happened was Dr. Shaldon in London, who had been following what we were doing in Seattle and doing very similar things in London, Dr. Shaldon in October 1964 actually did the first overnight dialysis in the home, had the patient dialyze themselves at home three times a week. He came to a meeting here in Seattle in December '64

and told us about this so we changed and we changed to overnight three times a week dialysis. We actually said eight hours but actually they got six to eight hours three times a week of dialysis. They did very well and that led to two things. One was that the state was giving us some money, from about '65 we had an appropriation from the state, to help support the program because medical insurance didn't pay. We had grants from the Hartford Foundation and in '64 we got a grant from the Public Health Service to do more with home dialysis but it was all a very sort of shaky sort of process of funding support. Well about '67, because our patients were very selective in those days and were going to work and so on, we started to work with the State Division of Vocational Rehabilitation and they were so impressed by our patients and the frequency with which they actually went to work and became productive. What they did was they agreed to pay for the home dialysis training, for the machine and to support the patients at home. The director told me that he thought we had the best program that they had because he said you know our big programs are things like treating alcoholics and drug addicts and people who have serious traumatic injury and he said you get almost everybody back to work. So they supported us right through until Medicare came in. So what else can I tell you about those days? So three times a week became the norm and the Kidney Center decided that this was the thing to do because it was much cheaper than dialyzing patients in the Center and it meant we could treat more patients. I wasn't at the Kidney Center but at the university – but we could treat more patients. So the Kidney Center, and I think this must have been '66, the board set the rule that everybody had to go home so that there was more opportunity for other people. Remember it was still a restrictive population of patients and so on and they did. In fact in 1972 we had 130 patients at the Kidney Center and 90% of them were on home hemodialysis and they were almost all dialyzing overnight. Those days have all gone of course, you've already probably gathered by talking to people. The financial difference was considerable because you didn't have to worry about nurses and we didn't use technicians in those days except to put the machines together. In '72 I looked at cost data and gave a talk at the ASAIO and, as I recollect it, the running costs for a home patient was somewhere between $4000 and $5000 a year because they were using Kiil dialyzers which they put together. We started dialyzer reuse in 1967 because it was such a hassle for the patients to take their dialyzers apart so most of the patients were reusing their dialyzers for two weeks and then rebuilding them.

DWM: Would they just rinse them out in between?

CB: They rinsed them out and filled them with formaldehyde, re-sterilized them and it all worked, I mean, beautifully. At that time I think the incenter dialysis, I think, I am not sure about this, but it was somewhere in the region, lets say, between $12,000 and $20,000, I don't know exactly where it was. Of course I didn't take into account the cost of training but that was paid for for almost everybody by the State DVR. Training costs are expensive.

DWM: But it's a one-time event.

CB: It's a one-time event, that's right. Another thing about Seattle, there are several reasons why it worked so well here; Dr. Scribner's personality was part of it, he was very persistent about everything that he did. Another reason was we didn't have a transplant program. See, transplant programs started about the early part of 1960 roughly in Paris and Boston and London and we did have a transplant surgeon until 1967 so we had to make dialysis work and we did. I mean people came from all over the world to see how we did it. The other thing that we did. which I was always very proud of, and Dr. Eschbach who is dead now but whose office this is, Joe Eschbach and I had a program of remote home dialysis where we took wealthy patients from elsewhere in the U.S. because there was not all that much dialysis in the U.S. in those days and from around the world. They had to come to us with their doctor and their spouse and I think the university charged them, I am not sure what they charged, but they had to pay a chunk of money out to get trained and so on and then we sent them home. We had patients in Singapore, the Philippines, Australia, we had one in Australia, and my favorite was one in the Sudan, in Khartoum, I went to the Sudan in 1967 to set up a patient to dialyze using Nile water.

DWM: Nile water, yes. How did these remote patients do?

CB: They did fine. I mean they were wealthy; they had their own doctors. Chile was another country; we had the Vice President of LAN Chile Airlines, for example, who was wonderful person. We had all sorts of interesting people that came.

DWM: So they would come here and train but you also would go visit them maybe?

CB: Well we would go and set them up at home because there weren't any technicians at home or anything like that so we would go and help them to set up their program. In actual fact the first home patient wasn't part of our program at all, he was president of a big Indian corporation, lived in Madras, and he came to Seattle just before I came in '63. He came in early '63, again, with his doctor and his wife and Dr. Scribner trained them to do dialysis at home and they went home to Madras. Scrib always said that the wife was better at dialysis than the doctor. He didn't live all that long, I think he lived about a year or something like that. So they were all very selective patients.

DWM: Sure.

CB: Our prize patient, who was again in Seattle just before I was there, came as a medical student from London from Guy's Hospital. His mother had read the Life Magazine article in a beauty salon, I think in the South of France, and his father knew the British Consulate in Seattle and they were a wealthy family. So Robin came to Seattle in early '63. They had to carry him off the plane he was so sick but he got better. There wasn't dialysis available in London in early '63; Stanley Shaldon hadn't really gotten started at that point. So we sent Robin to Edmonton; he was the first dialysis technician in Edmonton. Then when Stanley got started up he went

back to London to medical school and he retired about 18 months ago. He was the Dean in the Post Graduate School of Dermatology in London. He had 26 years on dialysis; most of it at home, and then got a transplant. Before that he never trusted transplant surgeons. He came to Seattle as a fellow when he was a dermatologist, it must have been in the mid 70s he came. We had what I think was a fantastic surgeon who was our transplant surgeon at that time. I used to tell him anything below the level of my head I would let him do if I ever needed surgery. I mean he was just a fantastic surgeon. Robin had been here about three months and then he came to see me and he said you know, put me on the transplant list. He said Tom is the first transplant surgeon who I'd trust to touch me. But of course he didn't get a transplant, I mean; they were few and far between in those days. Eventually Dr. Morris came to Oxford from Australia and Robin thought he would trust him. So he has now had his transplant for 26 years; Robin is something like 45 years out now, something like that, and he is the longest surviving patient in the world.

DWM: Amazing. And half of it on dialysis and half of it with his transplant pretty much.

CB: Because he did one very sensible thing, he married a nurse so she did home dialysis. She is a wonderful woman too. They have a son and they visit fairly regularly and in fact Robin is going to come to this Oral History we are going to do in London.

DWM: In London.

CB: I mean all of this went on at a time when the NIH, for example, wasn't interested, the National Kidney Foundation wasn't interested. I mean all the National Kidney Foundation was interested in was raising money for steroids for kids with nephrotic syndrome. I mean they told us, I think in 1965, from a writer they told us they didn't think dialysis was worth it so we used to complain bitterly about rat doctors and toad bladder doctors. So, when you read my article you will see many of the developments, not all of them I would say, but many of the developments came out of Seattle in the 60s and the early 70s. We were a major factor in getting the government to pay for dialysis. We weren't the only ones but… First of all when the Life Magazine article came out . . .

DWM: This is Shana Alexander's article in 1962.

CB: '62. Well when that came out I think I am right in saying that the White House was told about it and that there might be problems with all this. We had a patient, it must have been about 1965; we had two very strong senators and Henry Jackson was one of them and this patient, he had known her as a school girl, and so he was the first person to actually introduce any legislation in the Congress, it didn't go anywhere but … Scrib, much more than me, I got involved with politics after the Medicare program came in, but in the early days Scrib did a great deal of work. It was actually the National Kidney Foundation and George Schreiner who were probably the final people to push it through but you can read about that. I got the facts in

my article too as to what happened and all the political mess that it was. So, what else can I tell you?

DWM: Well.

CB: It's not changed all that much, it's just got worse.

DWM: I want to go back and just talk a little bit about some of the details here as well. I wanted to go back again to 1963 when you came over for that first stint for 16 months. It sounds like Scribner was a very important person in sort of your involvement in dialysis at the time.

CB: Oh, I mean he was – he was it.

DWM: Why? What was it that made him it?

CB: Because he solved the problem and his personality was such that he persevered and made everything work. I mean he was a guy who liked to tinker with things. He flew model airplanes and things like that. I got a biography about him as a man that I wrote; I should send you a copy of it if you remind me.

DWM: Absolutely, yes.

CB: But he was a remarkable person.

DWM: What kinds of things did he have to persevere in? What were the obstacles – in 1963 what were the big issues that you think?

CB: Well, of course we didn't know much about things. '63 is when Joe Eschbach started doing his work on anemia. I mean, you know, I mean he carried on with that for the rest of his life. I mean we didn't know much about these things. I mean up to that point basically the thing had been to keep patients alive and as well as possible.

DWM: So things really did change. This went from a time where people would say if you had chronic kidney disease it was a fatal disease.

CB: That's it. That's right. I mean this was what Scrib used to say in terms of the legislative things and so on, that this was the first fatal disease that we can treat. I mean otherwise it's universally fatal. It is interesting because the Reverend Dara who was the second chairman of the infamous committee, I asked him once about this, about how did he feel about that, deciding who lives and who dies. He said, everybody dies. He said, we're fortunate enough to

be able to let some people live longer but we're all going to die anyway and why shouldn't we let some people live longer if we have the ability to do so.

DWM: Yes. So in 1963 you are actually moving from a sort of a time where this is a wonderful treatment, you can take people who are going to die and you can keep them alive to beginning to say well if we're going to keep them alive . . .

CB: What do we find out more about _____.

DWM: Yes. Yes. And so what are the things in 1963 that are just the hot topics, the hot things that you are worried about, thinking about?

CB: Well, I mean some of those had come up before. I mean, the calcifications that patients used to get and so on, I mean they. . .

DWM: Were they impressive? Do you remember them? What were they like?

CB: They were impressive! I mean some of them were like football pads on people's shoulders, great lumps on their elbows and so on. And, again, they you know, discovered how to treat them. Once it became obvious that it was calcium and phosphorus, I think it was a gastroenterologist who told us that if you gave aluminum hydroxide it bound calcium in the gut and so we tried it and the thing was melted away. I mean it was trial and error so to speak. Anemia was the big thing and in the beginning, in '63, I mean basically we used to transfuse patients probably twice a month on average to make them function because otherwise a normal hematocrit, let's say is 45, and they ran around with hematocrots of about 25. What we didn't know until a few years later, as a result of Joe Eschbach's work was that if you didn't transfuse them they stabilized. If you transfuse them, you know, even if the kidneys are gone, they put out a little bit of EPO and if you transfuse somebody and more oxygen in their blood, you switch off the EPO so that once you start transfusing you have to keep on transfusing but if you stop a patient then the patient will end up with a hematocrit of 25 or so which they can live with, I mean it's not not perfect. Then he went on to do all these things with sheep and things like this, dialyzing sheep and so on. So we were the first people to use EPO because when Dr. Lynn cloned EPO Joe's work was such that they called us and said we're coming to see you and so we gave EPO and I thought it was the most wonderful thing I had seen since I had seen the first kidney transplant – the difference it made to patients.

DWM: Big milestones, yes.

CB: Big milestone. I don't know that there were any other things except how to just make it, make it work. I mean the other big thing that was going on at the same time in Seattle was peritoneal dialysis.

DWM: Yes.

CB: Because Fred Boen who came from Holland, I had known Fred in Europe before I ever came here, even before Scrib invented the shunt. Fred had been doing peritoneal dialysis in Europe and he was the first person who really, I think, came to understand the fluid mechanics and so on of it all. Anyway Scrib invited him here in late '61, I think, or early '62 and he came and he devised a system for making peritoneal dialysate which involved 40 liter glass _____ of sterile, this had to be sterile, dialysate and a very fancy machine so that we made the dialysate in a huge autoclave and then there was a sort of frame, the 40 liter _____ sat there together with an empty one and dialysate was pumped up to a header tank up above and then into the patient and then into the drain and that worked. We sent a patient home with a sort of simplified device like that, again it must be about '64 or '65. Dr. Henry Tenkhoff came to work with Fred in '64 and he invented the Tenkhoff catheter. We had industrial connections with Cobe, which is in Denver, and they made us a peritoneal machine about '67, maybe a bit later – I think it was about '67 – which was basically a huge pressure cooker so they had this big tank that they sterilized the dialysate in in the patient's home and then it was pump into the patient and out again. Then about 1970, give or take a year or two, Physio-Control, which was a Seattle Company, which was big in the cardiac world – I mean, you know, they've been bought out several times since. The president of Physio was a friend of Dr. Scribner's and got intrigued by dialysis and they made us a machine, which was much better, actually sterilized the dialysate before it went into the patient; we didn't need a tank. It worked. I mean it was a big machine but we used it both in the Center and we used it at home. We were just getting to the point where they were going to start working on, if you like, the _____ machine _____ when the people in Austin, Texas invented CAPD. And, in fact, Dr. Popovich was actually one of Dr. Babb's ex-fellows so we still have the Seattle connection there. But anyway, you know, doing peritoneal dialysis with a machine died then. It came back later on when Baxter invented the . . .

DWM: The cycler.

CB: Yes, the cycler. So we never got another machine after that.

DWM: When you think back on these patients in 1962/1963, were the patients pretty sick when they came to you all? Did you see them early? Did you see them late?

CB: It depended. If they were coming to the University of Washington Clinic then they were seen in good time. I think most of them were seen in good time. I mean that's all changed, as you know, I mean probably 40% of patients come and they've never seen a nephrologist or if they have it's in the last two weeks before they get to dialysis. But no I think, in general, the ones who came, some came through the university program, and by the mid 60s we had got one or two graduates of our program, so to speak, who had gone into practice so they looked

after patients well and referred them early and so on. So, no, they were all pretty well. Robin Eady, as I say, was very sick when he arrived.

DWM: Spell his last name.

CB: Eady.

DWM: Eady, okay.

CB: You'll find him somewhere on the internet I'm sure.

DWM: Okay.

CB: In fact, Robin told me that he had a very famous British nephrologist and he went to tell his nephrologist that Seattle was going to treat him and he said how much was looking forward to taking the Queen Elizabeth across to America and his doctor said, you do that and you're dead. So he flew and he was very sick. But, no I don't remember them as being real sick starting. Because, you know, I mean a lot of physicians didn't believe it worked or didn't know that it worked and so on. I mean everybody knows about dialysis now but even sort of, oh I think 20 years ago if you went to somewhere like Britain and so on, I think that people used to complain and say that British patients, if you're over 60 you didn't get dialyzed. The version I heard from somebody who I knew very well in Britain was we're very fortunate because he said everybody has a family practitioner in Britain, as you know, he said most of them don't know about us or they think that they're too old anyway. He said we actually treat the ones that get referred to us be we couldn't possibly treat them all if they sent them all.

DWM: Which, I think, is a point that we might talk about. We talked a little bit about the selection committee and I want to talk about that maybe right now, but also that there was sort of a pre-selection going on. That there would be practitioner's who would automatically say well you're not eligible or . . .

CB: Oh, that's right. That's right.

DWM: Yeah.

CB: Of course, again, most of them didn't know. I mean pre-selection in Seattle; there was a committee of nephrologists that looked at the patient and made sure they fit the criteria, which were aged 18 to 45 originally and they went up to 50, that they had no other serious complicating disease and so we never treated any diabetics at that point in time, and I forgot what the other criteria were; I am sure you will find it in my article. But anyway, they screened the patient and then the patients, who met the medical criteria, were then screened by the infamous committee. In the meantime, having seen somebody financial from the center and

we used to send them to see a psychiatrist. The committee, you know, decided primarily, I don't know how you would put it really, their worth to the community. I mean we didn't have many women patients, I have to tell you. We didn't have many poor patients although a lot of people couldn't afford dialysis and we used to run fundraisers and so forth. I mean people have said, according to who you talk to, that Thoreau or Picasso would never have been accepted as patients by Seattle because they were odd characters.

DWM: The ethics of all of that certainly has been under a lot of scrutiny for many years.

CB: That's were it began here, right here with this.

DWM: Absolutely. Yes. So this selection committee, whose idea was that that perhaps this might be a mechanism for figuring out?

CB: It was joint, as far as I know, between Dr. Haviland who was the internist who set up the program and Dr. Scribner.

DWM: And the reason being that they knew they had more patients . . .

CB: Well they knew there were going to be more patients than they could handle and how was it to be done. It could cause a lot of controversy in the ethical world. I mean Dr. Kolff said, no no it should be first come, first served until you run out of spots. There were other, sort of suggestions about it, I mean Dr. Schreiner was very upset because he said, what are these laypeople doing deciding; it should be physicians who decide who gets treated. Actually Scrib was the President of the ASAIO in '64 and in his presidential address you could almost use the same thing today with a bit of updating. I mean he talked about the whole issue of _____ diseases and lack of treatment and the role of transplantation and everything else. If you remind me sometime I'll try to find you a copy of it.

DWM: Great.

CB: You know what the professor of bioethics, who used to be here, always used to say that this was the beginning of bioethics as a real subject.

DWM: You know it's easy to look back on it today and say, well of course the sort of multi-interest group was may be the best mechanism at the time but to imagine that Haviland and Scribner recognized that they needed to have more than just medical input was a pretty dramatic understanding.

CB: Well I think Jim Haviland was probably responsible for that part of it because Jim was a very interesting person. He came here after the war. He was in the Navy in the war and he was associate dean at the university and he also established a private practice in Seattle. He could

have been the dean when the first dean retired or resigned. Jim could have been the dean but he didn't want to do it. He became, if you like, the society internist in Seattle so he knew everybody. The first president of the committee was a bank president, the second one was this clergyman who is a remarkable person who died a few months ago, there was a housewife and as far as I know, I think, she is still alive but I know the last time I talked to her she asked me never to talk to her again. **(You shouldn't put that in whatever you say.)**

DWM: I won't.

CB: I am trying to think. There was one physician on the committee who was not a nephrologist and the bank president. There was a senior union official, a housewife and I'll have to think what the others were; but they were all that sort of person, I think there was a lawyer. I think they were all people who Jim knew who we put together to do this.

DWM: What was your thinking about the committee? Did you have any thoughts about that type of activity?

CB: No, it seemed to be the best thing to do.

DWM: The best thing to do.

CB: The best thing they could do.

DWM: Because you had a limited resource.

CB: _____ the whole thing.

DWM: You had a limited resource with no way to figure out who . . .

CB: Yeah. Yeah. That's right. I mean how else would you do it. If, for example, you know you've got a medical director for the unit, think what would happen to him, the pressures he would be put under in terms if he was the sole person making the decision who got treated. We could see Henry Jackson or Warren Magnuson calling him up and saying, you've got to treat this patient. It took all that off it. There was only one patient. **(and you probably shouldn't put this in your thing either)**. There was one patient who beat the committee and he was about 60 I think and he was quite wealthy. He basically came, I think, to the first meeting of the medical group with his lawyer and said, I'm willing to pay – turn me down; something like that and he is the only person who beat the committee. I mean he was a remarkable person actually. It just worked and so I don't think we gave it a thought, it was the solution.

DWM: Yes and it certainly has become the fabric of biomedical ethics today.

CB: But everybody thinks, you know, we hear about the life and death committee. We called it the Admissions Committee.

DWM: Admissions Committee. Yes. Yes. Because it seemed pretty straight forward. We sort of breezed over the fact that you came in 1963 and stayed for 16 months and then had to go back to Britain for two years so what brought you back to Seattle? What made you come back?

CB: Well because I was frustrated. I mean dialysis in England – there wasn't much chronic dialysis. I applied for a job at the beginning of '66, a very nice job, which I didn't get. I came from the provinces and somebody from London got the job and I was just very frustrated. This is when I came to America and had this trip around and I think I went home with six different job offers. Then Scrib came to visit. Scrib hadn't said anything to me about it but we got talking about it one night and he said, well would you like to come back and at that point I had almost accepted a job in another place, which I'm glad I never went to. But, anyway, so my wife said I would have come back as a garbage collector if I could go on living in Seattle.

DWM: Seattle is a lovely place.

CB: It's a great place to live and it was even nicer then when it wasn't as big and crowded.

DWM: So when you came back in '66 what was your job? Did Scribner give you an assignment and say this is your – I mean I know Joe Eschbach, he was the anemia guy.

CB: I did some studies related to obscure substances that were present in the blood of uremic patients but it never got very far. I was basically responsible for running the program, you know, training the fellows and things like that. Then in 1971, when the then medical director of the program had – he wasn't the medical director – I guess he was in fact the executive director, I forgot what his title was, director probably. But anyway when he went into private practice he asked me would I be interested in doing it.

DWM: And this was the outpatient program?

CB: This was the Kidney Center.

DWM: The Kidney Center, yes, yes.

CB: The Seattle Artificial Kidney Center. They had about 100 patients at that time and I thought about it and thought it sounded interesting. I told my wife, ok we're going to go down there for a couple of years and sort them out then we can do something else. It didn't happen that way mainly because see I went down there in '71 and all the politics really got hot after that and I had a lot of fun with all the political things in the 70s and 80s.

DWM: Well let's talk about the political things. In 1971 what was brewing politically?

CB: Well there was all this question about whether we were going to get legislation that would pay for dialysis and it really came to a head in '72. As I say, I wasn't particularly involved in it at this point; it was primarily Scrib. Back in '67 there had been a report on dialysis and transplantation, the Gottschalk Report, which basically said, you know, the government ought to be looking at what it's going to do about this because it does work. They wrote the report and then it got shelved because I think the Vietnam War sort of was on one of its up phases at that point so it just got shelved. And then remember Medicare came in here in 1965, much to the dislike of the American Medical Association and most physicians, but it was working obviously and it works very well. By 1971 there was a move afoot. The Senate Finance Committee staff, and I am sure the Senate Finance Committee themselves, were thinking about what to do about healthcare and there had been talk about well what we should do is we should pass some sort of catastrophic healthcare to cover people who have, you know, catastrophic illnesses and so on. I think it was suggested that maybe that was a bit of a big leap to take, why not just pay for dialysis and transplantation. And of course the problem was, at least there were lots of problems, but part of the problem was that we were going around telling them and some other people were too, I mean there were 10,000 patients in the country at that time and about 40% of them were on home hemodialysis, transplantation there were a small number, I don't remember now. But we were basically telling that you pay for this _____ a lot of the patients are going to go home or the patient is going to get transplanted, they're going to become good tax-paying members of society and so on. See they only started to treat diabetics in about, I think, late '71. I think about then. So we had no idea about that out there. We had no idea about what the numbers of the elderly were going to be. I mean we gave them completely false information.

DWM: Well, based on your dialyzing pretty healthy people…

CB: That's right.

DWM: Within a certain age range.

CB: That's right. Not seeing _____.

DWM: Who were in fact having really good outcomes.

CB: Yeah. Well they were, they were.

DWM: Yeah.

CB: So I mean the patient population changed completely.

DWM: What do you think made the patient population change? When did it change?

CB: Because it became an entitlement program, you see, and 95% of the population was entitled so, I mean okay, it took time obviously for all this to filter through the system so that, you know, within probably 10 or 15 years. I mean I used to get calls from physicians in practice with questions like, I've got this 90-year-old, senile, old woman here whose got renal failure and her daughter assures me that I've got to dialyze her, what do I do? I mean I used to say, that's up to you. I can't tell you what to do. If you can't talk her out of it, you've got to dialyze her, she's entitled.

DWM: Yeah.

CB: I mean I think other countries have been much more sensible in a way. And obviously entitlement in quite the same way anywhere else and I think that physicians elsewhere do tend to be a bit more selective about it. I don't know what all the numbers should be but I think that maybe 10% of the patients who we treat might be better off not being treated but we can't do that and you don't know for sure until you start.

DWM: Until you start.

CB: I mean at one point, we didn't do this in our program, but the Minneapolis program, again I think in the early 70s about then, what they were basically doing was they were doing a trial of treatment and treating a patient for six to eight weeks and deciding how they were going to do and then they either stopped or they continued. That was their approach to finding who to treat.

DWM: I think certainly in looking at some of the early discussions about dialysis in the mid-1960s when they're beginning to really offer chronic dialysis that it was not an easy treatment. It was a difficult treatment physically, a difficult treatment, you know just …

CB: Not as difficult as you think. They made it difficult but no, you're right. As I say it wasn't popular in nephrologic circles. It only became popular when Medicare came in and there was money; that made a big change to all of it.

DWM: We're going to talk about that in just a minute as well.

CB: So, as I said, about 10,000 patients but I don't know how many programs, there must have been 150 programs or something like that around the country. In fact, after the Medicare program came in, about six months later, when it was obvious that it was grossly underestimated its cost the New York Times ran an editorial entitled Medicarelessness about it. So, I don't know. It changed and of course once it became a big industry it's all changed in other ways, which we don't really appreciate from the Seattle viewpoint.

DWM: Right. And didn't necessarily anticipate them either. Let's talk about the role of the AMA and some of the groups. As you all were being very politically active, trying to persuade Congress, what support were you getting from the medical community? How did the rest of the medical community feel about this treatment?

CB: Not much, I think is what you can say. By that in two ways, one that they weren't convinced that it was all that we said it was and also that I think a lot of them really didn't know what was going on. You asked about the AMA. One of my interesting experiences which must have been, I think in '64, an ex-president of the AMA came to Seattle because his son was one of our fellows and I got deputed to show him around so I showed him the dialysis and all of the things we were doing and talked to him and so on. I have this vivid memory of it. The Health Sciences at the University of Washington has a long corridor that stretches off into the distance and I remember standing with him at the end of this corridor and looking down. He was saying to me, you know young man it's very impressive this whole institution but what I can't get over is that it's all supported by the federal government. So that wasn't an official statement but I mean that fit and this was before Medicare itself came out which they didn't like, as you know.

DWM: Right.

CB: No, as I say the National Kidney Foundation was probably the best supporter that we had and that came late. As I told you, they weren't interested until about '65. But, two things; Downstate Medical Center had the first serious program I think, after us, really in the United States. They actually set up an organization, which is now the American Association of Kidney Patients, and so as an organization of patients they were obviously concerned. George Schreiner became President of the National Kidney Foundation, it must have been in about 1970 or somewhere about then, and he hired Charlie Plant who was a lobbyist and an excellent lobbyist. They had good connections with congressional people, I mean we had good connections because we had Senator Magnuson. They used to say that Senator Magnuson the floor "drunk" is more effective than the other 99 senators sober. I mean he set up the NIH and the Fred Hutch Cancer Center here and so on. So we had good connections. What happened was, and this must have been late '71 or the beginning of '72, two things happened. Wilbur Mills was Chair of the Ways and Means Committee, which dealt with the health subcommittee, dealt with health, and a patient actually dialyzed before the committee. Now the patient's association believed that was what did it. I have, and a number of other people have, serious questions but it looks bad when we say that because George Schreiner was called. They talked about it and George had said, no way do you dialyze in front of the Congress, I mean what happens if something goes wrong. Then George was called by the patient the night before saying he was going to dialyze and could George send a machine down. So George sent down one of his fellows instead, because the Kidney Foundation forbade him to go anywhere near this event, and told him, stop it if there are any problems. Well, I think the blood hit the cellophane, the patient got an arrhythmia and so the fellow switched off. So the dialysis must

have been a couple of minutes or something like that and George didn't know until a long time later was he told what had actually happened. In fact, the press were much more interested in a father who was there with his hemophiliac son. The press had little or nothing to say about dialysis but about hemophilia. But that was one thing and then George and Charlie, and a physician from Little Rock, I think, Arkansas and I forgot where Wilbur Mills was anyway; also went to testify within about a week and I mostly think that was probably what changed this whole story.

DWM: Pushed them over.

CB: Of course, as I say, they debated the bill in the Senate. When it was debated I knew a girl who was actually in the Senate gallery when it was done; it took all of 20 minutes to deal with this amendment. There was only one senator who was in vocal opposition and said, it's already like a Christmas tree, this bill, don't need to add any more ornaments on it. It passed and that's it.

DWM: I can imagine by that time the discussion may not have been so much, will this work but can we afford it.

CB: Yeah. That was the thing.

DWM: And you probably wouldn't have looked too good if you were a senator voting against, you know, a lifesaving, they die without it.

CB: Particularly when they don't know what it's going to cost.

DWM: Right. Right.

CB: _____what it's going to cost. So you know that's what changed everything when money was there. The government didn't know what to pay for dialysis. They grossly overpaid initially.

DWM: Were you all getting visits during this time from politicians, bureaucrats and..?

CB: Oh yes. Oh yes.

DWM: I would think Seattle would, if they wanted to know …

CB: People from Medicare came. They came and spent two days with me sort of talking about things and so on. My big failure was I didn't convince them that doing home dialysis with training was expensive. We are far out here, a long way away, and you know I think there were a lot of people at that time who thought this was all a craze again. I mean some people thought

it wasn't true that we were doing all these good things. So yeah we had from about the mid-60s onwards odd people came by here. I mean the whole of the nephrology world that was interested in dialysis came here. It was wonderful. I mean in the 70s the Japanese used to come to the Artificial Organs meetings, which would probably be on the East Coast. They'd fly into Seattle and we'd get two or three busloads of Japanese physicians who had come to visit the Kidney Center. The thing that impressed me most was the first thing they did was take a photograph of all the notices on the notice board. So it was a great time to be here in those years.

DWM: It does seem, as I have read and listened to some of these stories, that there was a good bit of tension still between the West Coast and the East Coast. The East Coast, more scientific community and …

CB: Well it wasn't a west and east as much as, well I think it's the scientific community. I mean the NIH wasn't interested at that point. I mean there weren't any grants from the NIH to do any studies 'til some time well into the 70s. What the NIH did do, which was excellent though, was somewhere about 1965 or 1966 it developed a contract program. The contracts were quite small and you could get something like $6,000, or something like that, to do little studies related to dialysis. We had a meeting once a year and the contractors came and reported what they were doing. That made a lot of difference. I mean we obviously had some, but a lot of other programs also got in the business and found things. We'd like to think we did it all but we didn't. But the contractors program was excellent and that died eventually.

DWM: You mentioned earlier that you all were doing things. You were leaning all the time and some of it was hit or miss and so there is this time in the 60s where there's a lot of innovation. There's a lot of change but a lot of it's coming because of observation and trial and error.

CB: Oh, that's right.

DWM: Compared to science.

CB: Forget about evidence-based medicine. You can't do it. I mean, you know, the NIH is doing a study right now about nocturnal and more frequent dialysis. They got 250 patients or something like that that they're randomizing. I don't know whether they're ever going to get enough nocturnal patients. I mean we haven't taken part because I think the study would be unethical. We know _____ better to even think about asking a patient who is willing to do things and telling them, well you can do it but it's only a 50% chance otherwise you stay in the center. So, you know, most things in medicine are observational. There are things that we can do with drugs and things like that where you can do really good studies. But, the hemo study, which you may or may not have heard of, that the NIH did I think cost 40 odd million dollars. Well the main issues it was suppose to show didn't show anything. I mean they found lots of little things now, you know, women over the age of 45 are better with this or that; things like

that. But the major issues never came to anything. There has been a lot of money wasted on it but … You see, I mean, I know that Scrib, on a couple of occasions, was asked, well shouldn't you have done a controlled study and he said, well what do you mean. I mean do I take one patient and treat them and let the next one die. How do you do a controlled study with this? Interesting enough though, you know when CAPD came out there was no control study about that. I mean Baxter was very good at doing the PR and everything else that made it fly. So, I don't know; it was interesting life.

DWM: Well I certainly have heard that Scribner made a statement at one time that if we had in place, back in the 1960s, all the rules and regulations we have today that these innovations would never have happened.

CB: No. No. I mean how could you. I mean well what he used to say; I don't know if this relates to the same statement, is that you know that these days you would be expected to do something with dogs first. And, as he said, dogs don't work; dogs clot. It's very difficult to keep dialyzing dogs for any length of time. You can do it with sheep, as Joe Eschbach eventually showed. We had an Australian vet who came to work with us for a year; I think who helped us to set sheep up as a model. But no, I mean, we just did it. One of my friends likes to say, I don't remember doing this, but he likes to say, well you know you used to call up your friend and say, you know what I just did yesterday, I'll tell you about it but don't ever do it yourself. I think that was true to some extent.

DWM: It sounds like there was a lot of conversation in this, what you call, the small group earlier.

CB: A small group, that's right.

DWM: Yes. Yes.

CB: Basically, apart from the contractor program, which was relatively limited, because that primarily was people who went into doing research related to dialysis, there were a number of university programs. The Artificial Organs Annual Meeting was the place where all these things were discussed. They weren't sort of discussed at meetings of the AMA. We didn't have an American Society of Nephrology until 1967 and we were always a very minor part of them. I think that changed probably sometime late in the 70s or maybe early 80s when they discovered there's a lot of money in dialysis. So now …

DWM: All of a sudden you're more important.

CB: Yes it was a relatively small group.

DWM: People were very forthcoming with ideas about what works and what doesn't work.

CB: Oh yeah. Yeah.

DWM: And it does sound like, in one of the proceedings of ASAIO, that Scribner showed his shunt. That there were big things being shown at the American Society…

CB: In 1960 he took it with him, he took Clyde with him, the patient. You don't know that story?

DWM: Tell me that story.

CB: Well the first dialysis was done on March 9th and it worked and the Artificial Organs Annual Meeting was sometime mid-April. Clyde was still alive and it was working so Scrib took Clyde, Clyde's wife and Wayne Quinton who was the engineer who had fabricated the shunt, to Atlantic City. The program had been set weeks before so it wasn't on the program. They had two sessions; they got together the really big noises in dialysis _____ things like George Schreiner and Kolff and John Merrill from Boston. They had a break for showing for which they showed them Clyde and told them what they were doing, a little private breakfast, and then that evening in somebody's hotel room they had Wayne Quinton show them how to bend the Teflon. It's actually written up in the 1960 ASAIO but it was never presented. George Schreiner, who was the editor of the proceedings, was so impressed that he told Scrib, if you can get me a paper on this in the next six weeks I'll publish it. It's the only paper that was ever published in the proceedings that had never actually been given at the meeting.

DWM: And as you look back at that, was that a big event? That being able to present to the . . .

CB: Well yeah because, you see, the thing is that the ASAIO, which was established in 1955, I mean basically the people who were part of it were kidney doctors who were interested in dialysis and machines and things like that and heart doctors who were interested in heart lung machines and things like that. So it was a very small select group. I mean they were all friends and they all shared things and so on.

DWM: I'll bet Scribner's shunt was a big splash maybe.

CB: I don't know whether it was or not. You know because, I mean, other people started to try it and if you look, I think, about '61 you'll find odd papers about it. It took a lot of time to really take off. I don't know. I mean you'd have to look through all the various ASAIOs to see. By the time it got to the early 70s it was beginning to be accepted and of course Boston had developed what now became Fresenius, you know, National Medical Care. Which was just like the Kidney Center except they made it a for-profit organization rather than a not-for-profit organization. So they were ready when the time came. We always thought that you should not be for-profit in medicine in this way but it's all changed and we can't do anything about it.

DWM: Why were you so dedicated to home therapies?

CB: Because it worked. I mean it worked beautifully. In Seattle, in those early years before I can down here, as I say, Joe Eschbach and I ran this remote program and we just became convinced very early on that patients. . . Well I mean, to quote Scrib again, and this is quoting one of his mentors who was a diabetic doctor, and this isn't a literal quotation but I mean it is basically the essence of what he said which is, that if you have any chronic disease, the more you know about it and the more responsibility you take for your own care, the better rehabilitated you will be and that's exactly it. We decided very early on, sort of by the mid-60s, I think Scrib and I wrote a chapter in a book about this about '67. We decided that the problem is that the patient gets into a dialysis center, they lay their arm out, nurses are used to caring for people and within a few weeks the patients have, what a psychologist, at that time, called learned helplessness. So if you want to send patients home you need to get them in general get them early before they got used to being taken care of with this complicated machine and all that sort of stuff that gets talked about. So I thought it worked. I don't think Joe trained the first patient, I think Dr. Curtis did. I trained the second patient and then Joe sort of took over the program and developed the program and I came back and joined him with it. But we just were convinced and we thought that it was what you should be doing. I mean it was what I would do if I had dialysis. I'd do long overnight dialysis. How often I'd do it, I don't know. But anyway so we always believed this. Scrib believed it. We believed it and we became a voice crying in the wilderness after some time, as you know.

DWM: Yes. Yes. At the time when you were early on believing it, were you believing in just home hemodialysis or were believing also in home peritoneal dialysis?

CB: Oh no. I mean we saw peritoneal dialysis but remember at that stage we were using these cumbersome machines. I mean they worked but we didn't have very many patients.

DWM: So the home therapy you were really talking about was home hemodialysis.

CB: Home hemo to begin with.

DWM: Yes.

CB: If you look at the sort of graph of what happened after '72 where you can see home hemo going down and then about '78 peritoneal starts to come up. And you know, obviously, CAPD took some of the pressure off. I mean there must be some patients who want to look after themselves and it took some of that off.

DWM: Why did home hemo take such a big hit after 1972?

CB: Well lots of reasons. I should send you my paper on the subject. The patient population changed, you know with all the diabetics and elderly patients. The physician population changed in that the sort of training programs for nephrologists, a few of them were doing dialysis, but most of the training programs weren't all that interested in dialysis anyway and so they certainly weren't interested in doing anything strange like having patients doing it in the home. There had been some explosion of for-profit dialysis centers around the country and for the first five years of the program home dialysis was not well paid for.

DWM: Why? Why was that?

CB: Well because the government didn't know what it was doing. They didn't listen to us.

DWM: Did you try to talk to them about that?

CB: Well we talked to them beforehand, as I say, the guy who ran the program came and spent some time in Seattle and he became a good friend of mine. But you know I guess it's a bureaucracy and everything else so that initially they paid for some of the supplies and things. They didn't pay for social workers to support them. There were a whole lot of things they didn't pay for. I mean they were paying $137 a dialysis for in-center but they were probably paying about $30 or $40 for home dialysis. It took us five years to get them to change. What happened was right after the Medicare program began there was a lot of concern about physician reimbursement because the original plan in the legislation was to be that they weren't going to pay physicians directly, they were going to pay the dialysis unit which would

pay the physician. I mean, I have to say that Scrib and I were probably responsible for that because we didn't really understand private practice medicine at that point. But anyway that's why we had the Renal Physicians Association. It met on Black Friday, July 13, 1973, and that was one of the big topics. But anyway, we organized this organization, which was political really and I was the second president of it.

DWM: So we're talking about the Renal Physicians Association now, which was born on Black Friday, July 13, 1973.

CB: In O'Hare Airport.

DWM: O'Hare Airport. Tell me what you remember about that first meeting in O'Hare Airport of the RPA.

CB: Well a lot of the physicians were very incensed about this arrangement for payment.

DWM: Who all was there? Do you remember who was there and who was vocal?

CB: Stuart Kleit from University of Indiana was very vocal. I remember him, again not for attribution now. He gave an impassioned speech and then he came and sat down next to me and he said, how's it feel to be the most hated man in this room. We were good friends actually.

DWM: Why were they blaming you?

CB: Well because Scrib had been the person who had been telling the government that this was the way to do it.

DWM: I see.

CB: But anyway, it became a political organization so.

DWM: So Black Friday, don't leave that yet; I want to know …

CB: There were probably about 20 odd people.

DWM: The fact that their reimbursement was tied to being paid by the dialysis unit – that the government is going to pay the dialysis unit and then they've got to try to get their money.

CB: That's right. That's right.

DWM: Right. And so these were physicians and did they see the RPA as a political group. I mean it was not a clinical group – it was a political group.

CB: No it was a political group.

DWM: If you were responsible for this how did you get included in that first group on Black Friday?

CB: Well, I had good friends. No I think I was only regarded as, you know, Scrib's sort of hanger on, so to speak.

DWM: Could you understand their arguments that day when you were _____

CB: Oh yeah. Oh yeah. Oh yeah.

DWM: Oh yeah now I get it.

CB: Well I'd never even thought about it. No I mean and the government changed all that and that all got taken care of but because we got, if you like, a little political group together John Sadler from Baltimore was the first president and I was the second president. In those days, I mean, dealing with Congress was very different. The Senate Finance Committee basically had three staffers. I mean, you know, nowadays I don't know how many dozens of staffers they have. So we got to know them personally very well and we were a good combination because John was a very, sort of, aggressive, not in a nasty way but he was a very aggressive sort of person and I was very quiet and so they trusted me let's say. That was the difference, they trusted the physicians, they listened to us. It took five years to get legislation passed but it got passed. But back to why home dialysis went down, National Medical Care didn't like home dialysis because it wasn't well paid and they could make money very easily without it. In fact, at a hearing in 1978 before the Senate Finance Committee I was the first to testify and I talked about home dialysis and the good things and so on. I was followed by two representatives from National Medical Care who basically said, you know, he's not telling the truth. There is all this problem and that problem and the other problem and you know in a congressional hearing you can't put your hand up and say, well no, no.

DWM: Excuse me.

CB: Bob Dole was the republican on the Committee, I don't know if he was the chair or co-chair, but anyway I knew Bob Dole's aid very well. She was a nurse and we had been sort of talking about all these things since about 1973. I had lunch with her and she said, well come back to the office and I'll talk to the senator about it. She came back and said the senator says, once this has been raised, he says he doesn't necessarily doubt you but he can't support this until we've had some other confirmation so we're going to talk to the NIH about it. Then about

two months later she called me and said the NIH says you're telling the truth and so then we got the legislation. They were not enthusiastic about it. I mean it's interesting; they've never been. The for-profits, in general, have never been enthusiastic about it until recently and in the last two or three years they've discovered it.

DWM: What do you think has made the difference in the last two or three years?

CB: Well I think one thing, you know, there has been a lot of publicity about more frequent dialysis and more frequent nocturnal dialysis and all that sort of thing. I mean it's coming. _____much difference to home dialysis. But I think the other thing is I suspect that they both see that there is money to be made out of home dialysis and you can't go on building dialysis units forever and hiring staff and everything else. I think maybe the reality has set in in the last two or three years.

DWM: So what do you see as the future for home dialysis?

CB: I think it's going to increase but I'm not sure how much. You know for about four or five years until about, oh about 2004, there were about 1800 or 1900, give or take a few, home patients in the United States. I'm just putting the numbers together for a talk I'm going to give in a couple of months' time. I suspect that by 2005 there were probably 2500, I suspect there's about 3000 patients now. So I mean looked at in that way in two or three years there has been a 50% increase. I mean it's small but _____ One or two people, we've been arguing and working about this for a long time, we've always said if we get to 3% in five years we will be ecstatic and if we get 5% by five years we won't know what to do with ourselves. It's going to be a slow process but interestingly enough one of the places I like to quote now is Finland because Finland had no home dialysis to talk about at all until 1998 when a program in Helsinki started up and I think Finland now has 8% of its patients on home dialysis.

DWM: Very impressive.

CB: So the numbers are small and all that sort of thing but it shows it can be done.

DWM: And your support for home dialysis today; is it still part of that if patients know a lot about their disease and take care of themselves, they are more _____

CB: They're better. I mean they've got to want to do it. Yeah, I mean I've talked for the last two or three years, maybe three or four years, I have talked to the American Association of Kidney Patients at their annual meeting about home dialysis. I usually start out by asking them how many people in the room are on home dialysis and may be the odd hand goes up and how many of you were told anything about home dialysis and a few hands go up. Most patients never even hear about it and if they hear about it they're told it isn't there. I mean there are 4000 dialysis units in this country and you can't expect them all to have home dialysis

programs. I've always argued that what we should do is treat home dialysis like transplantation and have centers. You can do it with one in Seattle but I mean in big cities you could have three or four centers where patients can be referred to be trained and they go home, they keep the same doctor and if they have a problem they go back to their original dialysis unit for backup dialysis but they get their support for their home from a center program with a nurse, you know a dedicated nurse.

DWM: Certainly transplantation is a good model for that.

CB: Yes.

DWM: Yes. For sure.

CB: But you've got to have enough patients. You see the state of Montana does not have a single home hemodialysis patient and yet it has a number of dialysis units but none of them are big enough to feel that they want to take this on and do it.

DWM: Right.

CB: So somebody's got to think something about how to do that. Okay, go on.

DWM: No, no, good. I just want to talk in a little more detail about some of the organizations and start with the ASAIO; when did you join it?

CB: '65.

DWM: Okay. And the early meetings were; did you attend a lot of the early meetings?

CB: I attended them all after I joined. Yeah. One meeting I remember I just went to say hello and left again because I had been to a meeting somewhere else and was on my way home. But, yeah, I've tried to go to them all.

DWM: And would you say that was one of the most important meetings early on as far as dialysis ____

CB: Early on it was the place to learn about what was going on in the world. As I say, it changed in the 70s. It used to be associated with a dialysis nurse's meeting occurred at the same time which was very good and then they decided to do their own thing which was, you know, I always thought was a mistake because, you know, the equipment manufacturers tend to think of the nurses as the people who decide about many of these things so their support of the ASAIO gradually dwindled.

DWM: When the nurses were gone.

CB: Yeah. Yeah. I thought it was a mistake to separate the two.

DWM: When were you the president?

CB: It must be about, I think '77, no, no, '97. I was an elderly president. I'd been around a long time. They couldn't think what else to do with me.

DWM: And dialysis is not so big a part of it now I understand.

CB: Very little, a very small part.

DWM: Yeah.

CB: I mean I go to the meetings purely because I've been the president and I think I've probably helped to support them. And, you know, there are some old friends there; even among cardiac surgeons I have a few old friends.

DWM: Because it's very heart focused now I gather.

CB: Yes it is.

DWM: Yes.

CB: As I say the ASN has a big thing and there's the Annual Dialysis Conference which University of Missouri runs which discovered hemodialysis about 12 years ago, before that it was primarily just peritoneal dialysis. So there are two. I mean that's more of a semi-educational meeting at the Annual Dialysis Conference because the real science, in general, gets presented at the ASN.

DWM: The ASN, yes.

CB: The ADC may have reports on, you know, 95 patients with this, that or the other but the real scientific stuff is ASN.

DWM: Certainly my experience with the Annual Dialysis Conference is it's very practical, very clinically oriented.

CB: Exactly. Yeah. You go to it then?

DWM: I have not been in the last year or two but I used to go a lot.

CB: Are you going to go this year?

DWM: It's down in Florida I think this year.

CB: That's right.

DWM: Yeah. I may …

CB: Well if you go, go for March 1, the day before, because we are running a program on the renascence of home hemodialysis.

DWM: Oh, okay good. I'll make a note of that actually.

CB: Modest prevents me from telling you who organized it. But we've got the Australians coming, the Fins coming and we hope that it'll attract a number of U.S. people who'll be interested and we'll get a whole day on home dialysis.

DWM: Perfect. Well very good. That's a good start _____. The RPA, that second year when you were the second president after John Sadler in the RPA, do you remember what was happening?

CB: Oh well we were trying to get things under control, let's put it that way, but my particular issue was the issue about the home dialysis. There were issues going on; the New Jersey branch of the Renal Physicians was suing the government and there were various things like that going on. I think it was really sort of trying to get the program sorted out. And, I say, I thought in those early days we did quite well with the Congress in particular. John Sadler being in Baltimore had good connections with Medicare itself so I think we made a lot of modifications. I mean, for example when we changed the home dialysis reimbursement we first of all got it to be 75% of the rate for in-center and then we got it up to 85% and then about 1981 or 1982 there was a lot of discussion about well home dialysis is, you know, declining rapidly, what can we do. That's when they came up with the composite rate. They lowered the rate for in-center dialysis, raised the rate to be equal for home dialysis with the hope that was going to save the thing; it didn't but we tried.

DWM: It was a good thought.

CB: It was a good thought.

DWM: What were the New Jersey folks suing the government over?

CB: It was something to do with the physician reimbursement issue as I remember it.

DWM: Yeah. Okay.

CB: Now another _____ one of my remembrances, it must have been probably the second year, before I was president anyway, we used to meet at the ASN in those days. I can remember a dull murky November afternoon in this dull murky room where we had our Board meeting and sitting around the room were all these New Jersey nephrologists who looked as if they were Italian and staring at us.

DWM: In a threatening sort of way.

CB: That's right. But we had no money. We couldn't join their suit. We had no money.

DWM: How about the AAKP, do you remember the early days and your involvement?

CB: Well I wasn't particularly involved right at the beginning. It was primarily out of Downstate, Eli Friedman and his wife were particularly involved. Have you ever interviewed Eli?

DWM: Yes I have.

CB: My favorite person.

DWM: Yes, a wonderful fellow.

CB: Yes. We never had it here. We never had a branch here because we had our own patient's organization from the earliest days I think.

DWM: What is your patient organization called?

CB: Well I don't know that it has a name now, it's all part of our foundation.

DWM: Foundation, yeah.

CB: But we did have a patient organization; I can't remember what it was called even. The AAKP, to us, was like the National Kidney Foundation. The National Kidney Foundation always wanted us to, you know, make our foundation part of theirs and we never would because we said, why would we send 20% or 25% of our money back to New York when we can spend it all here. The reason they wanted us so badly is that we could raise more money than any of their branches other than the New York one.

DWM: Yes.

CB: So we had several visits from presidents of the National Kidney Foundation asking us to join them.

DWM: And you've remained independent all these years?

CB: Yeah. I mean I'm a member of the National Kidney Foundation but we've remained independent.

DWM: Right. We've talked a lot about people over this interview but I do want to just ask, as you sort of just think in your mind, about your heroes, the people, the physicians in particular, that you would say, gosh these people really made a difference in my choices or in kidney disease. Who would those people be?

CB: Well I think obviously Scribner stands head and shoulders above everybody else in that regard. Eli Friedman; I've know Eli for 40 odd years now and am very impressed with what he does there. I go and give a talk there about once a year and I love it when I visit. John Sadler because I knew him before the RPA but, you know, only that he was another nephrologist many miles away who we occasionally exchanged comments with each other about but who got me interested in actually doing something with the politics and so on. Ah, who else? I mean they are the biggest three. I mean, Joe Eschbach was a very good friend of mine too.

DWM: Let me ask you about Scribner, just about Scribner the man, the person. What was he like?

CB: Fascinating. I'll send you my article. I wrote an article for part of a historical group for them about three or four years ago about Scrib as a man. So there's very little about shunts and things like that. He was just a very interesting person. And, as I say, he liked to tinker with things and he persevered. If something didn't work he worked with it until it did work. I don't know. As far as I know just about everybody who ever worked with him thought the world of him. So I will dig that out. You've got my email address.

DWM: Yes.

CB: Send me a little note to remind me.

DWM: I will do it.

CB: I may have to fax it to you. I suppose I could get a PDF made of it. In fact I may have a PDF of it.

DWM: I'll get it one way or the other. _____ fax or whatever.

CB: Yeah. I don't know. It was just interesting.

DWM: Yeah.

CB: He was modest. I mean, you know, I think he knew his own worth but he was very modest. I mean, he didn't feel his name had to come first on every paper that came out of the place. He was always happy to give credit to other people and so on. He was just very bright.

DWM: Problem solving and I mean . . .

CB: Yeah. Yeah. He thought things through.

DWM: Yeah.

CB: You'd get messages on yellow paper in the morning waiting in your office. Written at 5 in the morning to ask questions and so on.

DWM: Just thinking about things all the time.

CB: Uh hm. Uh hm.

DWM: How about patients that you remember. I've had one or two people say that this patient, a particular patient, taught me about, you know this . . .

CB: Well I mean the original three here were all special in different ways.

DWM: You knew them all three?

CB: I knew them all, yeah. I cared for two of them at various times and Robin Eady obviously has been a good friend since, _____I guess not 1963 because he left here by the time I came here but I've know him for many years. A number of patients over the years who've been very interesting and they've often been the President of the Patient's Association that we used to have. Bill Peckham, is our current patient, who I think is a remarkable person. He's a home patient. He's actually President of our Board of Trustees, the first ever patient whose done that. I know there are one or two patients outside. There is a patient called Mel Hodge who lives in California, Saratoga, anyway and he is a retired businessman and his wife is on dialysis. He's in his 70s. He's written interesting articles. I wanted him to actually come to this meeting and speak from a patient's point of view although he's not the patient, he's the patient's spouse, but he refuses to leave his wife.

DWM: Hmm.

CB: He says, even for 24 hours. But he has lots of bright ideas about what should be done and what shouldn't be done with the program. Who else particularly? I mean I don't know so many now, obviously, I've not really cared for patients for 10 years except to be involved with this study we did on home dialysis and so on.

DWM: Right. It does certainly seem like the patients in Seattle have been very active on their behalf. I mean maybe in particular more than some other places. I mean the Seattle patients have been very involved in …

CB: Well I think that we've always; I mean, quite apart from all this stuff about independence and that sort of thing, I think we've always treated our patients in a very reasonable fashion here. We've had our differences from time to time but again I think that reflects back to Scrib and so on. I mean those early patients were, you know, they were researchers in their own right so to speak.

DWM: Yes.

CB: So I think we've always felt … I mean it's got less obviously with time as the whole thing expands and everything else but I think we've always tried to encourage rehabilitation and things like that and education and so on. We've managed to keep our head afloat despite all the … I mean we didn't even have any for-profit ones around here for a long long time; we managed to keep them out.

DWM: Yes. We talked about people coming into Seattle to see dialysis. Coming to Mecca.

CB: That's right.

DWM: Yes. From all over. You mentioned from Japan; people coming.

CB: From everywhere.

DWM: From all around the world.

CB: I've got friends all over the place.

DWM: And it sounds like you travel out to them a lot now as well.

CB: Well I didn't do much before I retired. I mean I did around the United States but, you know, I used to feel guilty about going somewhere. I remember the first time I went to India, no no Scrib and I went to Australia and New Zealand, that's right, it must have been about '72, just after I'd come down here. We were away for, I think, three and a half weeks. We went

and talked in New Zealand, at least Scrib went to fish and I did the talking. We took our wives with us and then we went all over Australia. Then Jean and I came back and spent a few days in Fiji. I remember one of the prominent Seattleites on the board saying; well nobody's ever gone away for three weeks before. You know we've always lived hand-to-mouth because we tend to spend more money than lots of dialysis facilities. I was one of the founder members of the EDTA; I've only ever been to one meeting. No, maybe I've been to two but not much anyway. But now I'm retired I sort of go around a lot more and Joyce, my successor here, has been very generous about supporting my travel if I'm going to go and speak and so on.

DWM: Sure. Dr. Friedman, when I was talking with him, said that he had a trip to India with you. Do you remember that? Do you want to tell me what you remember about that trip?

CB: Yes. It was the Chief Minister of Tamil Nadu who had kidney disease and had a stroke. I don't know who, you know, Eli says that he got me to go with him. I don't know whether it was him or somebody at the NIH. You know there are always several people who claim the same thing. But anyway, whatever it was, Eli and I, an Indian doctor who worked for Eli and a neurologist from Dallas went and it was the most fascinating trip; not the most fascinating. It was very interesting.

DWM: What year would this have been about?

CB: I would think it must have been about 22 or 23 years ago.

DWM: And why were they having you American doctors go over?

CB: Well I'd had a very good connection with India. I went to India first in 1979 for a month and went and talked to the Indian College of Physicians, which was their big time scientific program, where I met the Prime Minister of India at the time who was the gentleman who believed that you should drink your own urine. _____ Even before that J. P. _____ who was a close friend of Gandhi's and was a big time Indian politician, was on dialysis and a friend of mine was treating him. He had a problem with his fistula and so his friend called me and asked if he could come to Seattle to have his fistula repaired and he did. I didn't know how important he was until I was waiting for him and they put me in the VIP Room at _____ Airport and I was waiting for him and the Indian Ambassador joined me. We got to the Swedish hospital where he was going to stay and heard the White House had just called and the FBI was sending a man to sit at the end of the corridor so I realized he was somebody important. He could have been anybody's favorite grandfather. We had a lovely week. He was really intelligent and really interesting old man. He was incarcerated by Indira Gandhi. He was one of the rival parties and he was sort of put under house arrest at the post-graduate institute in India. So when I visited, this was the first time I went to India, they had me look at his charts and so on because the question was, had he been poisoned. The health minister came to meet me and I said, no he hadn't been - I could explain it all - he hadn't been poisoned. I thought no

more about it then when I was in India a few years ago my friend, who organized all this, gave me a book which basically said that I had saved the bacon of the post-graduate institute. So, we had a lot of connections and Eli had too. He got a surgeon from Pakistan, I think, and an Indian nephrologist so we went out there. I went round the world. I left Seattle Monday morning and returned on Friday morning having circumnavigated the globe.

DWM: Why were you called there?

CB: Well to see what was to be done about this. You know the Chief Minister, who was an ex-film star, I mean that's most important in India.

DWM: What did you find when you got there?

CB: He'd had a stroke. And again, not for attribution, my temptation was to say, well forget it but Eli said no, no, no, no I'll arrange for him to come to Downstate and get transplanted and he did the right thing because I think we'd have been lynched. I mean when we gave our press conference they were hanging through the windows, the reporters, to hear from us. When we drove out of the hospital afterwards the streets were lined, I mean deep, with people shouting and asking how is he and things like this. I think we'd have been lynched if we'd not done anything for him.

DWM: Hadn't offered some treatment.

CB: I always gave Eli credit for that. We've been there since with Eli and his wife.

DWM: When was the elephant riding? That's what I need to know. Were you riding an elephant?

CB: Well we've ridden elephants twice but not with Eli. The first time we were there we rode elephants in Tamil Nadu in the forest there and on another occasion – you know I've been there eight times so. Another occasion we were on the border of Tamil Nadu and Karola. See after Eli and I had done this we became great favorites, obviously, and so I think my next trip back with my wife they organized all sorts of things. We ended up at this game reserve on the edge of … and we got up at 4 in the morning to see the elephants down on the lake and things like that. Then they offered us an elephant ride which we didn't particularly want but, having done it once; particularly when we realized that … You know the first time we had a proper howdow and sat on the elephant. This time we rode the elephant bareback with just a blanket over it. We were amused because the mahout, I mean Jean was behind a very smelly old man and I was behind her. I was more worried about dropping my camera. Jean told me that as we went by some of his friends they were calling out and calling him Sabu, you know after the film star, probably from long before your days anyway. We got off and we could hardly move because our legs have been spread like this. We just went to our room and collapsed in laughter. It was

something we could've done without. So I don't think I've ever been on an elephant ride with Eli.

DWM: With Eli.

CB: No. No.

DWM: Maybe he went separately because he _____

CB: When you go to Jaipur, the big palace in Jaipur, tourists are put on elephants to go up there.

DWM: Ah.

CB: But we declined; we walked up. I mean it's an interesting place. Another little anecdote, nothing to do with a history of this sort. We were just in Jaipur, the first time we went, we were just in there for the day. We flew in in the morning and were met by this major in fancy clothes who took us to the Chief Minister's residence and we met the Chief Minister in the afternoon. But the chief of police and the director of tourism for the state took us around. Two things happened. We went to the police inspector's home for drinks and before we had any drinks he said, well what have you bought and so we said we haven't bought anything. Well he took us downtown and to various jewelers and picked out several things for us and when I very anxiously said, well how much is that going to cost. He said, it isn't going to cost you anything, their make their money out of tourists. We didn't pay for that. We went back to his house for drinks and I said, you know its getting on and we've got a plane at 8:30, shouldn't we be going to the airport. He said, that plane won't leave until I tell them they can leave. Now my big regret about this was the pilot was Rajiv Gandhi and he said, of course you'll want to meet Mr. Gandhi and I said, no, no no, no. He won't want to meet us. The plane's already delayed by half an hour because of us. But it's a different world.

DWM: Yes. Your involvement early on in providing care opened that country to you which is just an amazing _____

CB: Yeah. I mean I've got lots of friends there.

DWM: Yeah. An amazing story.

CB: And in fact I'm going to Nepal. I'm not going to the ADC. I'm coming back to Seattle and catching a flight to Katmandu.

DWM: So you're going to your one day on March 1 and then coming back. Yeah. Yeah.

CB: That's right. March 3rd and leaving for Katmandu.

DWM: Katmandu sounds pretty good.

CB: I've been there once. Again, through one of my Indian friends I met at the ASN and he said, how'd you like to go to Katmandu? And I said, well if I can do anything. I didn't hear anything for sometime and then got this message; you're on the program.

DWM: Very good. So you do travel around the world lecturing, talking, yes.

CB: A little bit.

DWM: About dialysis?

CB: It'll all finish this year. A mixture of history, home dialysis and other things; dialysis-related things.

DWM: We've talked just a little bit about for-profit and nonprofit organizations and what has been your feeling about the for-profit dialysis industry beginning in 1972?

CB: Well we didn't like them. I mean obviously from the beginning.

DWM: What is it you didn't like about them?

CB: Well it just seems wrong for, you know, people to make profit in that sort of way out of dialysis. And I don't think they provided particularly good care. I thing they're doing better now. Basically in the late 70s and 80s, I mean with bigger dialyzers time got shorter and shorter and you know they run like factories. Then in about 1990 people began to realize that the mortality in U.S. patients was not very good.

DWM: And you think that was directly related to the for-profit center?

CB: I think it's related to some degree. You know, it's interesting, if you look at Japan, Japanese dialysis patients get as much or more dialysis than the average U.S. patient and they weigh about two-thirds of the same body weight. Australia and New Zealand; I mean there's been a study recently in Australia which suggests that the minimum time you should have on dialysis is four and a half hours; well there aren't many programs in this country that give four and a half hours as routine.

DWM: There are not many patients who want to necessarily dialyze for four and a half hours.

CB: That's right. That's right. I mean but on the other hand, as my Australian friends say, if you explain to them that this is what is going to keep them alive longer they're willing to do it. I don't know. Americans may not be willing to do it. I don't know. It's one of those things.

DWM: We have gotten very accustomed, I think, to short and fast.

CB: That's right. That's right.

DWM: Yeah.

CB: As I say, it's probably because I come from Britain, I mean I'm all in favor of a single payer system whether its run by the government or whether its run by a private insurance company; we certainly don't need all the dozens of different companies all making money, more than you can image. You know the comptroller general, I think yesterday, came out with this conversation about how we're not going to be able to support healthcare costs the way they are rising and we're going to have to do something about it shortly.

DWM: Certainly early on, it sounds like in the early 1970s, that one of the things the for-profits did is they decreased the cost of dialysis. I mean they could, Gus Hampers could leave the Peter Bent Brigham and have an outpatient dialysis unit and the cost for doing that dialysis for the government was much less than the cost that…

CB: In the hospital. You're right. You're right.

DWM: The academic center …

CB: Yeah. Yeah.

DWM: So they played some role in trying to control…

CB: They did that. Yeah.

DWM: I mean here we are in a time we can hardly afford, you know, healthcare and …

CB: But on the other hand the other thing which I think is a real concern, at least as I see it, there is this recent lawsuit that National Renal, I think it is, has got going with, maybe I'm not sure whether it's in Atlanta, but anyway with a state program, anyway somewhere in the south. The state program has told them basically that it won't pay their rates and at least if you can believe what you read on the internet, their rates for dialysis… Oh, it's an insurance company, it's not the state, it's an insurance company. Their rates for dialysis, the figures that were quoted were from $2000 to $9000 a dialysis. You see the thing is, getting back to this whole problem of what it should cost and things like that, right now, as you know, for the first 30

months patients who have private insurance; private insurance is primary. And you know, I mean it's true, we survive because of that but we aren't charging $750 and $800 a dialysis which they're doing. We aren't like the president of DaVita who, I think, his bonus last year or his salary last year, something, was $32 million.

DWM: Right.

CB: I mean, it just seems wrong.

DWM: Yes.

CB: But I don't know how we change it.

DWM: No. I think if we had the solution we would've definitely…

CB: But on the other hand, home dialysis will cut costs.

DWM: Yes. Yeah. Well good. We're sitting here in the Haviland Kidney Center.

CB: Uh hm.

DWM: Tell me just a little bit about the name change as you all left. Why did the center leave the University of Washington to begin with? I mean to become an outpatient center.

CB: Very simple. The original program in the university Scrib had a training grant from the NIH and I'm told, I mean this is second hand, I don't think I ever talked to Scrib about this, this particular incident. I'm told that they attempted to get a grant from the NIH at the end of 1960 and beginning of 1961 to continue the work and they were turned down because he wasn't doing a controlled trial. Now I don't know that that's true but a contemporary that was there at the time told me that. Anyway, what happened then was that Dr. Scribner went to the University Hospital administration and said he wanted to take on some more patients and they said, no. Because their argument was, okay you've got some money at the moment from the NIH but if your money ever runs out these patients will die unless the state of Washington takes responsibility for their care. Jim Haviland was President of the King County Medical Society at that time so Scrib went to see Jim. Jim told me he came to see me twice about a couple of months apart and he was so persuasive by the second visit I gave in. So they decided to do this

DWM: So moving it out of the university was a way to force the state and the community to begin to…

CB: Well it was the community. I mean Scrib's argument was, you know, somebody should support this; the community should support it. So the Seattle Kidney Center got its first support

that was a grant from the John A. Hartford Foundation, which is A&P Groceries. They got another grant from them, that was in '62. I think they got another grant. But in '64 the money was about to run out and that was where the Public Health Service came in. We had good connections with people in the Public Health Service by that time with some money. But Scrib always thought it's up to the community and so initially you had to be a resident of the state of Washington; you couldn't come here. The ones who came from outside were ones who came to our home program later on _____

DWM: To do remote hemodialysis.

CB: To do remote hemodialysis.

DWM: So when the Center left the University of Washington it was called…

CB: They were part of it – separate. It's a completely separate institution. It had it's own board of trustees, its own, whatever you do ____ It was a separate nonprofit corporation. And it's interesting because when I came it was basically it was a community center. When I came down in '71 some at the University thought I was selling out to the private doctors and the private doctors thought I was a Trojan horse from the University. But you know one of Jim Haviland's great characteristics was he was able to keep the University and the community together and it wasn't really an issue. But it was always separate. I mean Scrib used to complain and say, I'd got all this money and I used to say, no I don't have all this money, we spent it all on treating patients. But we did give support to the University. We gave some support to the Division of Nephrology and so.

DWM: For research for purposes?

CB: Well we paid for half a faculty member for a time and we paid for a number of fellows over the years. I mean it's changing now and it's got much closer together now. Joyce has done very well in terms of getting the University closer. I don't know, I have mixed feelings about that because having been on both sides and had to gel with both sides, I always found the University bureaucracy pretty terrible.

DWM: Difficult to make changes?

CB: That's right.

DWM: I mean it happens very slowly. So, Scribner was dialyzing some early patients but really doing that under a grant, a NIH grant.

CB: Three patients.

DWM: Okay. So from the moment he really said, I am going to step out, I'm going to be dialyzing more than three people, he was outside of the gates of the academic center.

CB: Yeah. They weren't going to support it.

DWM: And it was called the Seattle Kidney Center.

CB: Seattle Artificial Kidney Center.

DWM: Seattle Artificial Kidney Center.

CB: And Jim sort of worked through the local hospitals. This was the time, '61, when this was being set up. It was the time when heart-lung machines had become all the fashion and I think there were 10 or 12 hospitals in Seattle with heart-lung machines, most of which didn't have anybody who _____ what they're doing with them. Jim felt very strongly that, okay here's another technology and we're going to centralize this _____. So that's one reason why

DWM: One place. One… Yes.

CB: One place. Swedish Hospital gave us space in the basement of the nurse's home and that's where it all started.

DWM: Swedish Hospital was a private hospital?

CB: A private hospital.

DW: A private community hospital. Yeah.

CB: Yeah. Well they basically subsidized us in a way because, you know, in the very early years money was really very tight and, I mean, they even supported the payroll on occasion. I think it all got paid back and so on but they were very supportive. Though I used to have to fight them occasionally in my time because they'd like to think it was their kidney center. They used to go, no, no, no _____

DWM: So the Seattle Artificial Kidney Center is there and in that time of the selection committee, patients had to come up with some money. I mean you were running the Center, not you particularly, but the Center was being run and it relied on some income.

CB: Basically the patient was suppose to, as I recollect it, I think $15,000 was the number that had to be raised. And you know they used to have these fundraising – I think the movie probably showed that.

DWM: Yes it does.

CB: That was done but there was support, as I say, the state came in about '65 with an appropriation every year after that and the _____ Foundation gave another grant. The Public Health Service gave some money and so I mean it was living hand-to-mouth for a time. By the time that I came down to the Kidney Center we had enough money, particularly because they were sending everybody home. As I say 90% of the patients were home and by doing that it was financially much better than it had been a few years earlier. Shortly after I came, I didn't disband the committee, I sort of put them into cold storage, so to speak, and got them to agree that I would only call a meeting if I had a problem that I needed them to resolve and I only ever called a meeting once.

DWM: Because with that program you could accommodate everybody.

CB: We could accommodate those who were being referred to us.

DWM: Right.

CB: Then again we weren't getting diabetics _____.

DWM: Right.

CB: But we were actually not turning anybody down who got through the medical advisory committee. The only time I called the meeting was when a Nigerian student at the University of Washington got renal failure and the Nigerian government refused to pay for it. I brought the committee in and with a certain amount of grumbling, got them to support him. Unfortunately

he died about a year and a half or two years later but that was the only time that I actually used the committee after we'd, sort of, put it in cold storage, because we could treat what we got.

DWM: Now in 1972, when the public law was passed, was it a relief financially for the center or did all of a sudden you have many more patients and more expenses? Which?

CB: It was a mixture of the two. I mean, certainly a lot of the problems were taken care of. I mean it didn't really become a problem again seriously until, I suppose, late 80s or early 90s because Medicare wasn't putting… You've heard all these stories about, you know, paying $45 1972 dollars in 1990 and things like that. It was getting tight again. I mean we made a profit every year, which we had to do to keep going. But it was much tighter at that point than it had been because the foundation separated off from us. You see when the Medicare program was coming, when we knew it was passed but it hadn't come yet, our attorney came to me and said you know, you should divest yourself of the foundation because he said the Medicare may well turn around and say, you've got to use your own money first before you use government money. So we divested the foundation and that worked well for a long time but with time, because a lot of the original foundation board members knew about the Kidney Center and knew about it. With time it diverged and they got to suspect me too because they wanted their hands on the money of course and things like that. So I could never bring them together again. One of the things that Joyce has done is to bring them together again which I think is great because they do raise a chunk of money. I could get bits from them but I couldn't get my hands on them like I wanted to do but it does make a lot of difference

DWM: Sure. And it's not called the Seattle Artificial Kidney Center any more. How did the name change ...

CB: Well it changed to Northwest because it dealt with the Northwest and we took artificial out because we started doing the transplantation. In fact in the early 70s the federal government gave grants to set up transplant programs, tissue typing laboratories and organ retrieval programs so we set up a regional organ retrieval program, which I think was the second one in the country. The Boston Organ Bank was the first and I think we were the second. We organized distribution of kidneys for the whole four-state area for many years until transplantation of other organs came along and they couldn't understand why nephrologists should be involved in all that.

DWM: It's much bigger than…

CB: We had Don Thomas, the guy that won the Nobel Prize for his work with bone marrow transplant. He had a tissue typing lab so we got a grant so we could employ a technician in the tissue typing lab to do our tissue typing for us and so somewhere in there we decided that we were no longer the Artificial Kidney Center, we were the Kidney Center. Because originally, you see, the next kidney center was in Spokane about six months after this one started and that

was run by a private doctor out of the hospital there, Sacred Heart Hospital. So we divided up the state between us. I mean if you lived east of the Columbia River you went to Spokane and if you lived to the west you came to Seattle. Then about '65 the VA established its own dialysis unit that Don ran for a many years.

DWM: In Seattle here, yes.

CB: Yeah. Yeah. The next one was in Tacoma and that must have been in the mid 70s, I think, that we helped them set one up in the hospital in Tacoma. We helped several of the areas set up their own programs. Because I mean in the early days before, there was a program Alaska, we used to be very proud we had two patients on home dialysis in Nome, Alaska who dialyzed at home in the summer and in the winter when the permafrost really got going and their pipes froze, they used to dialyze in the hospital for several months of the year; doing their own dialysis but in the hospital. We thought that was another good example; you don't need to be real close to do home dialysis.

DWM: It's very impressive. It is, for sure.

CB: What else can I tell you about?

DWM: Well, I was going to say, is there anything that you can think of that we have not covered today that we ought to talk about?

CB: Well I think we should say that, you know, the Board of Trustees of the Kidney Center, I mean from the early days, as I say, Jim Haviland's friends in the early years, but I think in general has been very helpful and supportive. I mean there've been occasionally one or two that I haven't really liked and haven't liked me but in general I think they've been very helpful and supportive of the whole thing. And our local politicians, Jim McDermott, who is the democrat from downtown Seattle who I know very well because he was worked in the state legislature; I used to go see him for money then, he's done a lot to help us with things in both our current and previous centers have been good. But the community has been good too in a way. The foundation has always been able to raise money. Bessie Young who's one of our nephrologists at the VA, who is black, has worked very much more effectively than I was ever able to do in terms of dealing with the black community and so on. It's a nice place this Seattle and it's different. See many years ago, I mean, we used to go around saying that Seattle is unique because it has the Kidney Center, it was the first place in the U.S. to have the Medic One Program, you know, where you go out and do cardiac resuscitation and so on. It has one of the very first community blood banks and it has group health, which was one of the very first HMOs, which was hated by the local private doctors of course but they've got used to it now. So it was a different place. It was a nice place.

DWM: Well it is. As we've talked about of these things you know I tend to think about dialysis as a clinician. You know about Scribner and these people, these early pioneers, Dr. Kolff, you know making these clinical, really clinical, advances.

CB: You're right. I mean we could do all those things.

DWM: But what a funny mix it is then and today of physicians, physicians with vision, patients who are actively involved in their care, who make a big difference, communities who can support these types of events, the government who weighs in and it is, you know, it is a little bit about managing money.

CB: Yeah. That's right.

DWM: It is a little bit about managing people and it is a little bit about the science of medicine. It's… Yes.

CB: I think it's become much more an issue of managing money and those sorts of things. I mean when I retired, I must say, I would've preferred them to have picked another physician but I think Joyce was an incredibly good choice because she has hospital administration background. You know when I was running the place most of the time I only had two or three problems going at once, now there are so many problems going I think it takes a real trained administrator to run the place.

DWM: Well it is very complex.

CB: Yeah.

DWM: And it is treatments that are clinical but are being influenced by money.

CB: That's right. That's right. No, I guess the other person I haven't mentioned is Tom Sawyer who was the Chief Medical Officer for most of the time I was the Executive Director here. Tom was just a super doctor. He was very modest and you know _____knows him but I used to say that, I can do all these things I do with the government because I can go and leave Tom in charge and know that he won't do anything stupid while I'm away. It'll run probably better when I'm away than when I'm there. I think he is dead now, I don't know. He had Alzheimer's. My Christmas card to him this year came back – no one at this address – so either they've moved or he's died.

DWM: Yeah. But even your arguments today for home dialysis therapies.

CB: Uh hm.

DWM: There's the argument that it's better for patients.

CB: Yeah. Yeah.

DWM: But there's also the argument that maybe it costs less to do this.

CB: That's right. But of course then you get into this argument, well you haven't got a real study to prove that.

DWM: Yes.

CB: Well, I told you, it used to cost about $4000 or $5000 in the early days. All the papers that have been published, or almost all of them, say it costs less. We know it costs less. I mean, you know, for our Medicare report that we report to Medicare every year, I can tell you that, forgetting about the training which we lose money on, but once the patient's home it costs us probably about 60% of what it costs us to do a dialysis in the center. You know and that's data that's sent to the government so it must be pretty accurate, I assume.

DWM: Of course I want, in my heart of nephrologist clinician heart, to say we well should do it because it's the right thing for patients.

CB: Uh hm.

DWM: But there is always this..

CB: That's right. And then you get into this whole question of more frequent dialysis.

DWM: Yes.

CB: You know, Bob Lockridge in Virginia.

DWM: Yes.

CB: And I have been struggling for a while, I don't know how many years. Have you interviewed Bob?

DWM: I have not yet. _____

CB: Well you should do. Bob and I have been sort of pushing legislation for, I think, eight years now.

DWM: Right. A long time.

CB: A long time. It's interested because I mean again it's all anecdotal evidence, if you like, but most of them, not everyone, but most of the papers that have looked at all at hospitalizations say that hospitalization and less hospital days are fewer and so on. But of course that's in part A Medicare and dialysis is in part B Medicare and the two never meet.

DWM: Never meet.

CB: And I don't know. I don't know. I talked to Jim McDermott, I'd say a couple of weeks ago; I mean we don't think there's going to be a Medicare big bill this year. I think they'll solve the physician reimbursement issue because they've got to do that.

DWM: But that's it.

CB: I think the chances of anything else…

DWM: Yes.

CB: Are pretty remote.

DWM: Yes.

CB: So he hasn't put the legislation back in this time.

DWM: Yeah. No. I mean they're preoccupied with other things.

CB: That's right.

DWM: Just as an anecdote.

CB: Uh hm.

DWM: I had a patient who was on peritoneal dialysis, then was transplanted, had difficulty with her transplant, when she came back she was on home hemodialysis five or six days, slow dialysis through the night, creatinine was 2, we were supplementing her phosphorus and I'm just thinking to myself what is the argument here.

CB: Clinically, I mean, there's no doubt …

DWM: You know she felt by far and away, of all the modalities that she tried, I mean, she felt by far and away the best.

CB: My belief is that it's all politic and this is CMS way of dodging the bullet because the ASAIO probably, about 2000 or might have been 2001, we had a program about more frequent dialysis and we invited the, then, medical director of Medicare to come to the thing. We talked to him afterwards and I mean he was convinced that we were right. I mean he didn't do anything to help us to get it paid for but he went away very impressed. I mean we had a couple of patients, I mean it wasn't just the doctors talking and so, yeah, I think that's right. If you talk to the Australians, I mean, interestingly enough the Australian government supports home dialysis, supports more frequent dialysis, listens to the physicians. One paper, which I liked which they published about a year ago, they looked at comparing alternate night home dialysis with six times a week overnight dialysis and, you know, obviously it's not quite as good but it's not bad at all.

DWM: Not bad.

CB: It's much better than anything else. And, I mean, Scrib, you know, talked about this probably 10 or 15 years ago that it should be possible to do alternate night dialysis, with the present reimbursement it would cut your profits, but it would be possible to do it and make a little bit of money and I think that's probably true. We got in the short daily business because we did the first studies for the Aksys machine which… Have you ever heard of the _____ machine?

DWM: I have. Yes.

CB: Okay. Well we thought it was wonderful. I mean, okay, it was unreliable and it weighed 270 pounds or something but you know it was 1990s technology. But our patients loved it. When they went bankrupt and we had to put patients on to the NX Stage machine, they went into mourning.

DWM: Oh.

CB: I mean they didn't feel as good, they felt there was a lot more work involved and so on. I have to give the NX Stage credit that they've really sort of made home dialysis move. So we'll see what happens.

DWM: Yeah.

CB: I mean there's Renal Solutions out there now that's just starting up.

DWM: Yes.

CB: And DEKA Research has the patents from the Aksys Ph.D. so they're working on something so I think … Actually, I was in Japan about three months ago at a meeting and I met a

bioengineer from Seoul, Korea and they have a fascinating little machine. I'm going to go and see it in a couple of months' time. There's very little home dialysis in Asia but they think that it could come. The Japanese have just established a home hemodialysis society. I think there are 180 Japanese patients out of, however many it is 300,000, who are on home dialysis. So I might die before all this gets right but.

DWM: Well things do move slowly.

CB: Yeah they do.

DWM: They do change slowly. Well I just thank you so much for spending this time with me today.

CB: That's all right. That's all right. When we get our thing from the Wellcome it'll take some time because what they do is they first of all print it all up, you know, the whole thing verbatim so to speak. Then they send that to you for corrections and they ask you various questions and so on. This is the only thing they've done in renal disease but I looked at one of theirs where they'd looked at research in Great Britain in health from, I think it was, 1960 to 1980 or something, and it was about 100 pages long and it was fantastic and interesting.

DWM: How many people do you think will be together for the Renal?

CB: I don't know. I know the man at the Wellcome Foundation, a nephrologist, who I'm sure is the person responsible for this meeting, he told me there was a lot of interest. Originally they were inviting about, I think about, 20 people. I think what they do is, I think they have a table and people like me will sit around the table and then they have chairs at the back and you know people can...

DWM: Add comments and things like that.

CB: Add things . They seem to have picked people who I think are very interesting people so we'll see what comes of it.

DWM: Very good.

CB: So when that eventually comes out, which I suspect it'll probably take a year for them to do all that, I'll send you a copy anyway.

DWM: I'll look forward to that. Good.

CB: So is there anything else I can do for you?

DWM: No. Thank you very much.

CB: Well send me an email and I will send you my Scribner paper.

DWM: Very good. I will do that.

END OF DICTATION

Dugan W. Maddux, MD
DWM/dlb
T: 06/14/08