

STAFF MEMOIRS PROJECT

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Mayo Clinic Visual History Project

Interviewer: Mark Flaherty

Interviewees: Dr. Frederic H. Helmholtz, Jr. and Dr. Emerson Ward

- MF: Give me your name and your title when you were full-time here at the Mayo Clinic.
- FH: Yeah. I'm Fred Helmholtz my father was Henry I'm being a junior they used my second name it's H. Fred Helmholtz. I came here as a boy 1921 and lived here except for going away to school I went to Shatic and then to Dartmouth and to John Hopkins then to the Massachusetts General, then I came back here as a fellow in physiology and pathology. I worked at the institute for several years and about the time I had to decide what to do next came the second World War, and a good friend of mine was Randy Lovelace and he got me interested in aviation medicine and asked me to go out take charge of a small laboratory that they were building with a decompression chamber at Consolidated Aircraft. The firm that built B24's, PB2Y's, and PB2Y's during the second World War and so I did that for a couple of years. Then I came back here half-time when Doctor Walter Boothby got sick and wanted me to work in the Aeromedical Unit. I did that half-time for another year or two and then after the war was over I came back full-time working in the Aeromedical Unit out of the Aeromedical Unit grew the Department of Physiology with Dr. Code, Dr. Wood, Dr. Lambert and several others and out of our using our various techniques studying human beings. It became sort of natural for me example to develop pulmonary function testing and for Dr. Wood to develop cardiac cauterization and then we, I worked with him in cardiac cauterization as well as in the pulmonary function lab. When John Kirkland started to wind up to do something about congenital heart disease we of course we're there with our catheters to diagnose them and sort of give him an idea of what he was up against in the operating room. And since I had training in pathology I would, if things didn't go too well with the surgery I would usually get my hands on the heart to go over and see what was actually wrong with them. And so that this is sort of the way the things went until in the mid 1960's I got involved through the College of Chest Physicians with the group of respiratory care physicians and respiratory therapists and so I became a member of the committee called the Board of Schools that was trying to help with formation of various schools. In 1970 a new committee was formed and I was elected the chairman of what then called the Joint Review Committee for Respiratory Care. I retired from that in 1976 as I retired from the clinic and at that time I was appointed to National Board for Respiratory Care which is the credential organization and I've been involved in that ever since just a quick thumbnail.
- MF: That was very good.
- FH: Quick thumbnail description.
- MF: Let's go back a little bit when first came here in 1921, um tell me a little bit about, I know you were young but what kind of impressions did you have of the clinic at that time and maybe Rochester?
- FH: Well I had almost zero impression of the clinic. All I knew was that father used to leave in the morning and come back in afternoon or late afternoon, or sometimes late in the evening and we lived southeast where the catholic church is on the corner of 11th Ave and 4th Street SE and I went to home school for a year and then father built the house which is on 6th Street and 9th Ave and built a tennis court down below the house and I went to the Edison School then to the high school, which was then included junior high school, senior high school and the community college was all in one building, Coffman Building, was the name of that building. Well I can remember walking with father to the clinic occasionally

and I can remember when they started building the Plummer Building. There used to be a small building there which had sort of a little library in it and then that disappear and then the Plummer Building went up and I can remember seeing fathers new section in the Plummer Building. I used to walk with father as far as the Coffman building and he would go on to the clinic, and in those days when he would go to the clinic so of the days he would go to Saint Marys hospital. Saint Marys in 1921 was pretty small but very shortly built on to that and I think it was a year after we moved to SW Rochester that I had my appendices out in the new building, I can remember that. Again small sketch.

MF: Tell a little bit about the Plummer Building, do you remember any of the bells going up into the Plummer Building?

FH: No, I really don't. I can remember the first carol on performance which was really quite something to hear all this music coming from up in the sky. But the details of the installation of the bells I don't remember. I don't even remember if I was in town when that happened I can remember the first time they closed the bronze doors when Dr. Will died but other than that I don't remember any of the details.

MF: So you remember them closing those doors then Will died.

FH: Yeah, when Dr. Charlie died and Dr. Will.

MF: I've got some footage where people are all lined up on the street and some film footage, people are lined up on the street, a lot of nurses.

FH: I just remember these big ole doors. (laugh) (sigh)

MF: Beautiful building I mean when they built it was amazing on the materials they used and the craftsmen.

FH: Yeah, I doubt whether they'd find people to do some of the things that they did in that building.

MF: Yeah I don't think so. Tell me a little bit about when you started doing physiology work which lead to some of your work in aeromedicine. Can you tell me a little bit about that, some highlights that or things

FH: Well the things that I remember for example, talking with Dr. Code and Dr. Wood, we'd decided that with the increase in the request for physiology studies on the human began that we really didn't know an awful lot about the details of the circulatory system for example we knew that the heart beat and pumped the blood out and so on but we didn't know what the pressures was of the various parts of the circulatory system. We knew what so called blood pressure was but we didn't know the details of it, how it was developed circulatory system. So we decided to use ourselves as subjects to study the normal circulatory system and I was one of the subjects and that wasn't pleasant.

MF: Fixed that. So tell me a little more about how you used yourself as a subject.

FH: Well I can remember being the subject it took all morning long to do this study. First place you get is put the catheter in a vein and the elbow and run it up into the heart and then put needles in an artery and you usually put a needle in the artery

in the groin and sometimes in the ankle. And it was amazing how different these pressures turned out to be from what we expected. We knew pretty well what they had to be because of the cuff measurements that you do, measuring blood pressure with a stethoscope and listening for the pulse, but one of the things that was an interest to me was the fact that the highest pressure in lets say your ankle was higher than the pressure at your heart level so something was distorting the pulse wave because we carefully looked at the area under pulse recording and indeed it was greater centrally so the blood was really flowing from the heart and flowing out to the periphery. But finally somebody pointed out that there is something called the pulse wave and this is a sound, and sound travels much faster than blood does. So that the sound was being produced by the heart and going out to periphery and being reflected back and it was distorting the pressure wave. This is one of the fun things which has very little importance but it was interesting. I can remember that when Dr. Wood, who was the master of these techniques was the subject. I had to push the catheter so that it was a little touchy and so on and as the last part of the procedure we did. We would hook the individual up with a mouth piece and a nose clip on him and connect him to an oxygen filled spirometer to watch his breathing pattern and then exercise him and measure oxygen consumption during rest and exercise. And I can remember Dr. Wood's breathing pattern as being very irregular as the test went on and I'm sure that what was happening was he wanted to tell me something and couldn't get at me. (laughing) He had taught me everything that I knew about this procedure and I never did find out what he wanted to tell me but there it was on these irregular breathing patterns. Well anyway we did get all these data together and it was a good basis for this test that we were doing and the abnormalities we found in patients.

MF: That's interesting. You know just sounding doing these tests on yourselves is way beyond the call of the duty. How did you just decide that well you guys were the closest to it?

FH: Well actually in those days it was before there was such a fure over the use of subjects so that we didn't have to go through any committees we just did it. I'm sure today we wouldn't be allowed to do that. But anyway we got it done and we got the normal data measured and so we could compare the abnormalities in patients with what the normal should be.

MF: Now tell me how did this work into the aeromedicine?

FH: Well actually this came out of the aeromedicine. The techniques that Dr. Wood developed for studying aviators and following what was happening to them were useful in studying the human begin, the patient. For example, on the centrifuge the subject was on this cart on the periphery and the measurements we made had to be recorded in a room, different room, so we needed something that could be electrically transmitted from the patient through the actually some mercury troughs that were on the center of this, so that the cuff and stethoscope to measure pressure were not available to measure the pressure of somebody spinning around on the centrifuge. So that the pressure nanometers were developed and Dr. Wood put pressure on certain people in the industry to develop these and he and other people of course were interested in this so that the instrumentation was developed for studying the aviator which were later very useful later in studying patients.

MF: Interesting yeah.

- FH: This is the same way as far as breathing goes, we were studying patients in decompression chambers and seeing what happened to them when they were exposed to lower, lower pressures. I can remember the first time I went in with this small chamber which was the original one and we got to equivalent to 40,000 feet in pressure and I promptly passed out and there was much venting and letting air into the chamber to resuscitate me. I learned that at 40,000 feet unless I purposely hyperventilate or over breathe I can't stay conscious even breathing pure oxygen. So I learned something about myself that I could apply to aviators.
- MF: That reminds me of the story when we did the aeromedicine story about Dr. Lovelace actually jumping out of a plane, was that 40,000 feet?
- FH: Yeah that was at 40,000 feet. He and Lindberg developed a bailout bottle that you wore in your suit and there was a mouthpiece that you would hold in your teeth and breathe pure oxygen. He jumped out of a plane that was out over Seattle, he had gone to Boeing and they had taken him up in a B17 to 40,000 feet and then he jumped out with a static line so that shoot opened immediately and it knocked him cold. He was unconscious and fortunately the shoot opened perfectly well and pretty soon he came to again on the way down. When I got to Consolidate Aircraft it was after he had done that and one of engineers when I was talking to them about developing this little laboratory and so forth this engineer asked me do you know Randy Lovelace? I said yes indeed I do. He said well I wish Randy Lovelace had talked to me before he had jumped out of that plane. And I said why did you say that? He said I would've told him that he was get knocked cold unless he used a smaller parachute and he explained to me that when you get out of a plane and as the parachute is enveloping? It picks up a lot of air and down at near sea level it picks up more air than is equal to your weight so when the shoot develops and develops a tremendous drag it not only has to stop you, but it has to stop more than your weight of air that is moving along. And he said at 40,000 feet the air doesn't weigh very much, so what happened the shoot all it had to do was stop Randy Lovelace and it stopped him so suddenly that it knocked him cold. So then I was taking care of some ferry pilots that were ferrying B24's and you know we use smaller shoots when we were going over the mountains over Asia and we have to bailout we don't want to get knocked cold.
- MF: Interesting. Now with Lindberg came to the clinic a few times, did you work with him?
- FH: I meet him one time but I was out at Consolidated at that time.
- MF: Tell me a little bit about once in the aeromedicine, and the unit was going and things what were peoples reactions at the clinic and in Rochester? I understand that you guys had things like flights going out of Rochester and doing testing.
- FH: Well we had to see what happened in the plane here is the same thing that happens in the centrifuge. So the army assigned a plane to us and then we developed a technique of a spiral descent so that they could develop pulling out of this decent, develop these forces that were developed on the centrifuge, developed the same pattern so that we were sure of what happened in the plane was the same. Actually we knew it would be and we had to show it. During the war years tests like this which were very expensive were possible because the government wanted the information as much as we did. It was interesting at Consolidated Aircraft we did the same thing, comparing the susceptibility to aviators bends in the chamber and at 35,000 feet in actual flight. This was again was something

that we would've never been able to do except during the war years when a military assignment was made of this plane a B24's were designed to fly at only 25,000 feet or lower and I had urged them to see if they could get it up 35,000 feet and they finally did and we were able to use this plane and use this technique to test individuals for their bends susceptibility. Well anyway the Glenburg came out here to a consult with the aeromedical people and when Randy Lovelace was here and would spend some time but I was never here at the time although I did meet him one time.

MF: Tell me a little bit about working on the as you guys did the heart catheterization and the heart lung machine to keep the heart going. What were peoples thoughts about doing this kind of work, how was the atmosphere at that time about oh were going to try to hook up a patient to a heart lung machine? What were the thoughts then?

FH: Well I could remember that the engineers that were working with Dave Donald for example who's one of the people who were working on this. They were pretty calm about this whole thing. They knew that it was going to be pretty rugged on the patients but they knew from the work with animals that it could be done and would work. The question was how you could get the blood oxygenated without letting it clot. That of course is the big, big problem. So the design of the exposure of the blood to oxygen or air was the problem and as you know at the University of Minnesota they developed a bubbler were they would have the blood coming into a chamber and bubble gas through it and take the blood off where the didn't get any bubbles. It worked but it was not ideal as it wasn't as efficient as what they developed here which was a cascade of blood not bubbling but in a film that was exposed to air or oxygen around it and that way you didn't get any bubbles entrained but the question was then of the pumping system etcetera etcetera. And it was a pretty complicated business but I can't remember the name of the guy who developed the thing in Philadelphia but they took his design and modified it here to develop the one that Mayo used. They still essentially used the same type of gadget.

MF: You look at the machines and their not really too different from 1955 and the ones they use.

FH: That's right. The attempt has been made to make them a little bit unwieldy but other than that the principal on the way it functions is the same now as it was then. I can tell you that they work because I had it done at one time.

MF: So you knew a little bit about it.

FH: I knew a little bit about it and I was not happy to have to have it myself. But I remember the first case that Dr. Kirkland did at Methodist Hospital. I was in the next room and I would go in and get blood samples and do pH's on them because we wanted to follow what was happening as far as the acid base balance during this procedure. As I came into the room one of the tubes came off the machine and bloods one squirt of blood across the room and Dave Donald was right there and put it right back on before any serious amount had been lost, but that was scary.

MF: Do you remember anything else about that first operation?

- FH: Nothing. The thing I remember about it was the patient successfully operated on and had her trouble removed. In other words her heart was corrected and then she died of respiratory death, and we didn't know enough to know that this was a patient that needed to be ventilated and have a ventilation assistant after surgery so that this was the unfortunate situation in which we didn't know enough to do what was indicated and what might have saved her life. I don't know if it would've saved her life or not but she died of respiratory death, ventilation death.
- MF: Thank you. That was interesting. Tell me a little bit about, can you kind of tell me some of the highlights of your career. Kind of went over you career but what are some things that really stick out for you, some accomplishments, things that you're proud of.
- FH: Well, it's a little hard to think of things that I'm dully proud of I'm proud of the fact that we really found out a lot of things during this time. But I've had some experiences that were interesting. For example, I used to go in and out of Wright Field when I would go back in forth from San Diego to clinic and I would usually stop off at Wright Field where Randy Lovelace was then head of the aeromedical lab there and then Major Sweeny was interesting in explosive decompression. We were starting to pressurize aircraft and of course enemy bullets can puncture aircraft very nicely and if you have pressure in them the pressure is apt to suddenly disappear. The question was what would happen to me if I'm sitting in pursuit ship lets say pressurized and at 40,000 feet and all of a sudden a bullet hits and decompresses the thing. So Major Sweeny mocked up a P38 cabin which is just a small unit and then put a hole in the end of it and covered it with paper. Then put this at the equivalent of about 6,000 feet which is about what the pressurized units keep the cabins actually in aircraft now, in commercial aircraft. Then put this inside the biggest chamber they had and would eventually evacuate the chamber and then there was a machine let a point hit this paper and the paper would explode and there was enough air to bring this equivalent of this chamber to that of about 40,000 feet. Well he was looking for subjects for this experiment and I was there one time and he said how about helping me out here, and I said sure. Well this was quite an experience you were sitting there waiting for something to happen and all of a sudden whoosh there were six of us that put up with this. It was interesting that one of the six of us developed a slight pneumoserothorax in other words the lung had ruptured enough to leak some air into the pleural space. So we went back and studied the movies that had been taken of us during this procedure and it was very interesting, he was the only one that had been inhaling at the moment of explosion, the five others of us had actually been exhaling which evidentially made enough of a difference so that the pressure got out of our lungs in time so it couldn't rupture our lungs. The end of the paper that he wrote on that the question was should you say, please when you're exploded exhale. But it was very interesting study.
- MF: Sounds like it. Any other, tell me any other little incidents like that, not just with aeromedicine but with cauterization or anything like that.
- FH: Well, I don't know. One of the most upsetting things that ever happened to me was a patient that I was catherizing developed a heart attack right on the table, plugged up a coronary artery and proceeded to die and that's upsetting when you're studying somebody and they die. You sort of feel something about this whole thing was my fault. I can remember it took me quite a while to get over that. I remember in 1943 Walter Boothby point a finger at me you are now in charge of oxygen therapy. In those days oxygen was administered by tent. So I

went out to Saint Marys Hospital and here in the basement were lined up a whole bunch of oxygen tents and as part of this work, ice containers and this was before the days before air conditioners. These tents were little air conditioners and the main job of these people that I was supposed to supervise in the hospital was to take enough ice to these tents to make them cool. Then of course there were the oxygen cylinders that were hooked up so they could keep the atmosphere in the tent at a higher concentration of air than in oxygen. It was amazing to go down in the basement of Saint Marys to see all of these oxygen cylinders lined up and I noticed one that was of a different color and I looked at the labels on it and it was 10% CO₂ in oxygen. And I couldn't understand 10% CO₂ and if you had me breathe that you could kill me with that. So I wondered what in the world this was. I never did find out who in the world would order this. But I told Arnold, I told Arnold if anyone ever orders this let me know immediately. That was a mistake. At four in the morning he called me and said somebody has ordered this CO₂ they didn't say it had to be in oxygen just CO₂. So I rushed over there and somebody who must of missed some of the lectures in medical school had ordered 10% CO₂ for a patient who was in diabetic ketoacidosis. Now when you have diabetic ketoacidosis and you're getting too much acid. There for you breathe like a steam engine trying to keep your CO₂ down to compensate for the acidosis. And of course had this individual who thought this fellow was low on CO₂ there for he wanted to give him extra CO₂, of course it could've killed him. But at four in the morning I gave a little course in physiology in acidosis but it was Arnold Dolly was one of those people who are trained to do only certain jobs but are completely reliable and I don't know what we'd do without them and there are a lot of those people at the Mayo Clinic.

MF: Tell me a little bit about the colleagues that left real impressions on you.

FH: Well, the person I recruited was Ward Fowler and he was a very quite, careful, very thoughtful, and very good experimental physiologist and did some very important things in breathing physiology. I can remember it was Ward Fowler who recruited Bob Heit and let me explain one of the things you do when you measure someone breathing is you connect them up to a spirometer, which is a gadget which measures the volume as you breathe in and out of it. The technique that we used was to record the volume as the time changed. So you had a volume time relationship. Dr. Heit and a fellow by the name of Fry, not the Fry here, devised the use of measuring volume and flow. Now this had to wait for a flow meter which was handy but measuring volume and time, and flow that way. When you had that happen you had a curve which is so called flow volume loop, and I can remember going into Ward Fowler's room one day and he was looking at a time volume curve and I noticed that he had some flow volume curves nearby and he was looking at the time volume curve and saying to himself the data is all there but I can't see them. And this to my mind told me what this measurement of flow volume had done to showing on a graph some things that you couldn't see on similar data and the graph was different, well the flow volume loop has become a standard method of indicating problems with the breathing system. Charles Code, Dr. Code who sort of took over for Dr. Essex as the chairman of the physiology section which developed after the war was a very precise individual and I must of all the people that I've known if I wanted some really good criticism of a paper that I'd written he was the one I'd go to. He spared your feelings not at all, he would really point out all the things so you could get an idea of what you'd done wrong. Then later John Sheppard joined the department and let see who else there were various other fellows who went through the

department and took part in the studies but many of the fellows that the clinic would come in physiology study to use for their paper for their advanced degrees.

MF: Tell me about you mentioned some of your accomplishments, with your career here what do you see as some of Mayo Clinic's greatest accomplishments over the years?

FH: Well I suppose first of all I did one supper at what is now the Foundation House, Dr. Will did say that he thought that the idea of combining education and research was worth while. And of course he then went on to say that it was Henry Plummer who had suggested that if he and Dr. Charles and others in the group here wanted to have a really lasting organization they'd better get it connected with an education institution. You could really have private institutions but if you want it to last

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EW: So I undertook this determination in Dr. Mason's lab. He had two very helpful young women who knew a lot about laboratory work and were very helpful to me. So I did a whole lot of these determinations and established one of the early what the normals should be that not much had been done with normal we ran a group of normals of course to see what the liver patients if they had anything wrong with them what the difference would be. Well it turned out that none of the liver patients had anything wrong with their erythropoietic protoporphyria. Well I used to go over and see Dr. Mason and I would run into these two laboratory women. Who'd been very helpful and one day about two years after I'd finished my work and was back on the staff at Mayo one of the girls came up to me and said do you remember that erythropoietic protoporphyria determination that had been done on that liver patient? I said oh of course I do. She said well of course you would because you were working on all these other things she said well we had a decimal point wrong on that determination. (laughing) Oh well that's life.

MF: That would make a little bit of difference. Tell me a little bit about Drs. Kendall and Hench had discovered cortisone in the early 1940's correct?

EW: 1948, well of course Kendall had discovered it before that but the how thing kind of bubbled to the surface in 1948.

MF: What was it like then around here when you started with cortisone and you saw these drastic improvements?

EW: It was very exciting of course. I was working, Dr. Kendall had a little office and I was occupying and I was doing my preprodynorphin work I was occupying Dr. Mason was in charge of my effort, but I was using Dr. Kendall's lab space. I used to see Bud Kemper who was the chief resident on the rheumatology services Saint Marys at that time. He would come in with some needles and syringe and cortisone was precious in those days that he would give these to Dr. Kendall who would then recover whatever little residual there might have been left in that syringe and needle. It was a very precious commodity. Of course, then Dr. Hanson was able to get a few hundred milligrams from Merck. Merck was helping with Dr. Kendall in synthesizing cortisone and Dr. Hanson and you know the story of how he was always looking for something he found it in the first patient they gave it to remarkable results. So when I joined the staff in 1950 cortisone was just coming on the market and we had amazing influx of patients

who wanted to be treated with cortisone, of course we couldn't and so it was a very busy time. I joined the staff in 1950 and that was the time that Dr. Hanson and Dr. Kendall won the Nobel Prize it was an exciting time.

MF: You mentioned that you worked with Chuck Mayo also what kind of an individual was he?

EW: Chuck was one of the kindness, gentlest and yet extremely good physician and he dealt with patients that hardly anyone else could do around Mayo. How hard it is to see a patient retire because we all do and we all knew we were going to have take on Chuck's old patients and had to measure up to what he had been to those people was going to be a very difficult task.

MF: You know you mentioned when you first came here it was a little bit smaller and you knew a lot of the people, what has been your thoughts about the growth here at the clinic? Any thoughts on the amount of grow happening here, did you ever think it would be come this big?

EW: (Laughing) Well I guess I really hadn't thought how big it would be, we all knew it was growing and it was growing all the time that I was here and I've been retired for so long that it's growth is greater than what I would've thought I guess. I'm not surprised that it is this big. It's a little distressing to think how big it is now compared to how Rochester population was 25,000. I think the members on the medical staff were, I'd have to check this figure, but I think it was 200 to 250, but jolly this is compared to what we have now, it was easy for me to know everybody, it would be very difficult now. There's a certain feeling of confidence when you know people you're dealing with and I think it would be much more difficult to have that same feeling when you don't know people as well. Some things have changed. Some changes are for the better and some things are not for the better. There's always change. That's the one thing that we have to expect and have to meet. They met it very well here under difficult circumstances.

MF: How do you think the Mayo Clinic was as successful as it was being here and what kind of ideas or why do you think it was successful?

EW: Practice good medicine and surgery. There are a lot of factors that go into that of course Dr. Mayo and his two sons were remarkable people in you know that history. There were a lot of things that if we hadn't had Saint Marys Hospital, Mayo Clinic as it developed wouldn't have been, it might have developed some other way but it wouldn't have been what it was and is today without Saint Marys Hospital. You take Dr. Will and Dr. Charlie and if they didn't have a good hospital to work in they would've been good surgeons but they wouldn't have had the opportunities to develop the practice the way they did with Saint Marys available to them. So that was no question that Saint Marys Hospital had a important role in the development of Mayo Clinic and then of course there were not a lot of great medical centers around here. The University of Minnesota was one but not particularly well known at that time. The railroad coming through Rochester running east and west had a marked influence because it made it easier for patients to get to Rochester. Patients could come from Dakotas, Illinois, Indiana, and come on the railroad that made a big difference towards the development of the clinic the availability and of course the reputation that the young doctors Mayo developed early one tremendous magnetic so Rochester being pretty accessible particularly in the Midwest was just a natural form of growth in a way. There were a lot of things, remarkable, and of course the

establishment of the Mayo Foundation was very important link in the chain because they were the first people, who doctor's Mayo established the first recognized graduate program of medical education here. That attracted a lot of vary able young men who came on staff, some of whom went other places, we had a number of man who went and established Mayo like clinics in a variety of places throughout the United States, all of these of course lead to Mayo's fame and fortune. Given enough time I could probably think of a hundred more things too.

MF: Tell about your time on the Board of Governors, what were some of the most challenging issues during your time that you had to deal with?

EW: Well we had to deal with the five day work week. And you say what's so hard about that? Well it's quite a shift in the who institution but that was well managed, Bill Sar did a great job on that. Then we developed the medical school and came to the floor and had been proposed previously the idea hadn't, wasn't quite right but while I was on the board the time was right for that. So we decided that we would start a medical school and we had a lot of ups and downs, but finally got it going and I think it's been very successful. Having starting our medical school we had to start our development program. Previous to this what was really a formal development program headed initially by Tony Bridwell If you hadn't interviewed Tony Bridwell you'd ought to. But any rate we had to raise a certain amount of money, 33 million dollars I believe it was. We had to have that much money in order to run our medical school without approaching on other means of Mayo for 10 years and we thought after 10 years we'd be able to raise what every month we'd need through prolapropy and activities. So we had to raise 33 million dollars very quickly and we did. But that was the start of our development program which has been extremely successful that leads to things like the Hilton building, the Guggenheim building, not in my day but now more recently the Gonda building, Siebens building, Stabile building, in a way come indirectly through efforts of the development program. That's been a very important factor and I've pleased to see that that's gone so well. The other thing that we started and it didn't come out it was very slow in development, actually since I've been off the board it's developed tremendously, maybe that's why, and that's our regional medical program. This was really started back in 1965, I think it was 1965. Johnson, President Johnson, started he had a program called the Regional Medical Program. The idea of that was that doctors in small cities or country would come in to the major centers and would learn and develop a kind of pathway for them to get patients in if they needed to. Well that regional medical program didn't work the way Johnson meant it to at all, but what it did and a very important thing it opened the opportunity for major centers like Mayo to go out to the doctors. It maybe a little hard it's so different now but in those days the doctors outside major medical centers were very jealous of their practice and they didn't want somebody to steal their patient. Well with the regional medical program we were able to turn the direction around and go out to these fellows and say there's this program and here's the things we can do, here's the way it will work and it finally began to work in the way that it should it's just exactly the opposite that Johnson had expected. But that gave us the entry to all these other doctors. So we began to provide services to them, maybe once a week a radiologist would go to a certain city and he'd review rays, or a pathologist would go, or a bio-chemist would go and offer services and even once in a while one of our fellows would go out and fill-in for a period down in Forest City for example. These things now of course, you saw the other day we're gonna build a new hospital in Owatonna this is a it's all part of the original program of what we

started many, many years ago, it's evolved so rapidly over the last 10 to 15 years. It's kind of a slow start, but it was a start and exciting part of what we did there. The other thing we did was to change our Board of Trustees quite a bit, which I think was a very good move. Previously there had been a limited number of members of Board of Governors, who had served on the board of trustees and that created some problems things always create problems. So I thought to put all the Board of Governors together as trustees, which makes it kind of big, but we had a big table up at the Foundation House so we did that and that solved some institutional problems very well. Then we began to expand our external board of trustees and we've had some marvelous people serving on that since that time, just a remarkable group of men. Much to everybody's surprise, I don't know if you know the story about Lyndon Johnson or not, Lyndon you know had gallbladder trouble and George Hollenbeck, who was one of our premier abdominal surgeons and John Macawatch is his assistant without took out Johnson's gallbladder. Well ok, Johnson decided not to run again, he had dealt for years with Jim Cane, one of our internists who came from Texas. And as a matter of fact, Jim was married to the daughter of one of the big Texas politicians and had become acquainted and had served as Johnson's doctor, Johnson hadn't need much doctoring but he and Jim Cane had worked together on that. So when Lyndon was ready to retire, he called Jim and said you know Jim I'm going to retire and I'm not going to run again and after I retire there's only one board I want to serve on. Jim said oh well what's that? Johnson said I want to serve on Mayo Foundation's Board of Trustees. Well at that time Rochester was a pretty Republican place and you know there was difference of opinions of Johnson. But what can you say when the president says he wants to be on your board? You say absolutely, when do you want to start. You hear many stories about Lyndon having crude actions and at times profanity, Lyndon Johnson was a perfect gentleman the whole time he served on our board, perfect, never saw any of those aspects of his character at all. Actually he was one very fine trustees and probably did more homework than almost any other trustees he'd talk to other people, he'd say well know Mayo's talking about this Mike Dovekey what do you think, well Mike Dovekey thought this and Johnson would bring this to our meeting. He didn't insist that we pay any special attention to him but he wanted to, he had some things he'd suggest, excellent trustee, couldn't have a better one much to many peoples surprise. This goes back to our fund raising activities and we were discussing this in the board of trustees one day and how were we going to raise all this money for the medical school and then to support other research and educational efforts and Lyndon said that's easy just tell them that you're going to cure cancer. Well enough of that.

MF: Can you tell me any other trustees that stood out in your memories?

EW: Well of course Sam Johnson was a marvelous trustee. But our first external chairman was Atherton Bean. Atherton Bean's grandfather had started a moving company, became International Milling, Atherton had successes to the head of International Milling after his father and grandfather. Atherton had been a road scholar and was a sharp of mind of anybody that you could've ever see and also very broad minded fellow in his approach to life in general his interest in medicine. He served, I forget how many years I think he and I retired from the board about the same time but he did a marvelous job for us. And starting our Board of Trustees in a more active way then they had ever been before was able to through his influence to attract some very outstanding people early on to our board, we hadn't had so many of those previously. So I would say Atherton and Sam now by the time I retired from the board, Sam his place was taken by Steve

Keating as I recall and I didn't know Steve very well, but obviously was a good person. The two that I served with that I served with were Atherton Bean and Sam Johnson, wonderful people, completely different sorts of people.

MF: What do you think stands out as Mayo Clinic's biggest accomplishments that you've seen? You know some of the milestones that it's accomplished?

EW: Well in what respect?

MF: Well with the effect in medical care, or just the way the clinic practices the group practices or any of the discoveries like cortisone or what do you think one of the greatest achievements have been?

EW: Oh, I would want to measure it in terms of great achievements, there just one after another achievements all of which are very significant. Well you say great, well what's great? Is it great that Mark Coventry brought back hip replacement from a trip to England that nobody was doing in the United States? Well it's great but it's just one of so many, the very many different things. Was the cortisone discovery great? Yes it was, but that came from 30 years of work for Dick Kendall. During that time a lot of people were wondering why Mayo was wasting a lot of money supporting Dr. Kendall's lab when nothing was coming out of it. It reminds me of the sergeant that I had when I was a medical officer in the base Keflavik in Iceland an airbase. When the bomb was finally dropped on Hiroshima this fellow said well now we know I came from that town in Tennessee, name are terrible, where the original radioactive

MF: Was it Knoxville?

EW: No, it wasn't Knoxville, well it was a well know town, were the original work was done separating the U235 that you needed for the bomb. And he said you know for many many years people had wondered what was going on at that plant because they could see all this stuff coming in and nothing was ever going out, but now we now was going out. Well this is kind of like Kendall's work for many many years, people saw all these adrenal cortices from Hormel and Chicago and nothing every coming out. But, finally cortisone finally came out and really revolutionized not just rheumatology but a number of other immune diseases, allergies, it's just had a tremendous influence, it's not used as much as it used to be because other things have come in. It really awakened the whole field of rheumatology and allergies, immunology. So well when we went off to medical school, there's a major accomplishment, we graduated now, I forget how many know, but they're really a great bunch and their serving well all over the world. Our graduate program has been a remarkable addition to the development to the good doctors throughout the country. Of course the best thing we do here is take care of patients and if you don't do that right, nothings really good. And I think that Mayo's been able maintain the highest standard of care for our patients and that's the real clue to our success.

MF: I hope to do a story about Lou Gerhig and ALS do you have any recollection of him being here?

EW: No. I wonder if that was before I was here.

MF: It might have been. I think he was here in the early 1940's.

EW: Well I didn't come, well I came in 1946 as a fellow. I think he'd been here before that. I think that would've been such a well known thing because he was most everybody's hero in those days. I don't think so. Funny how that happens. I can remember Harry Truman coming here when he was running for re-election came through on the railroad and was out west and was going down to Chicago, or heading in that direction anyways. And as I said at that time people at Mayo and in southeastern Minnesota were pretty strong republicans. Harry Truman was running a railroad campaign where he would sit on the back car, the observation car and they'd always have a little place where you could come out and he'd come out and give a talk. And so he came to Rochester and a great crowd of us went down to see him, I don't think a many of us had voted for him. We should have but didn't and so he came and gave a talk, mainly was largely about a national health insurance plan, we should've paid attention to it, because it could've been doubted in those days and we would've been a lot better off in my opinion but at that time we that was not what people were thinking. We were all interested in what Harry Truman had to say but we didn't agree at all with his address, we should have paid more attention, he was before his time. It was an interesting episode here in Rochester, reflected kind of the feeling of our conservatization I guess you could say.

MF: Rochester has always been kind of conservative hasn't it?

EW: Yeah it has been.

MF: Where do you think that originated from?

EW: Well good question. I guess from all the hard working farmers around, all the Scandinavians in its day it was a very conservated group of people, hard working, god fearing, life saving, and they were just a conservated, it was just that kind of place at least from what I've read. John Kennedy of course since he was a young man, have you ever seen that tape?

MF: No.

EW: You might look for it, the last time I asked about it nobody seemed to know where it was. But John Kennedy was here as a young man. I've heard the tape and I've used it in a presentation or two when I've given talks around and somebody interviewed him and asked him what he was interested in and so forth and so on, and he said well he didn't really know but he thought maybe the thing to do was to go into public service. Somewhere there's a tape of an interview of where he talks about that it's very interesting. Then we have Roosevelt was here but that was before I came. His son who was is I think it was James had ulcer trouble and if I recall I think it was Howard Gray who operated on James Roosevelt and both the mother and father were here but that was before my day, so I didn't see them. I had the photographic people make up a wonderful tape, we had Kennedy, and Roosevelt and we had another president, I can't think who it was, I will tomorrow, I always think of it tomorrow.

MF: Yeah give me a call. Was this an audio tape?

EW: Yes an audio tape.

MF: Now when Kennedy was here he was very young?

EW: Yes he was a very he was just a young man, this was long before he was in the politic it was probably shortly, it may have been just before the war, it might have been right before the war. There's a third president concerned with that. I don't know. I'll think of it.