FILE: KOOP1

EHRHART: Would you mind stating your name and your affiliation with Dr. Schnaufer?

KOOP: I am C. Everett Koop. At the moment I am professor of surgery, psychiatry, and community and family medicine at Dartmouth Medical School in Hanover, New Hampshire. I come to this position after my most recent employment by the United States Government as the Surgeon General of the United States. I had two consecutive terms, 1981 through 1989.

EHRHART: And your affiliation with Dr. Schnaufer?

KOOP: My affiliation with Dr. Schnaufer was first that of trainer, mentor; I directed the training program at the Children's Hospital of Philadelphia in pediatric surgery. When she finished her training as a surgeon at Union Memorial Hospital in Baltimore, she came to me for what was then a 2-year program, and we were, by the powers that be, forbidden to have more than two residents at any one time, and that meant that the person who came on board was the junior for a year and then became the senior so they leap-frogged like that. She stayed for her given time and then went back to Union Memorial but she had an affiliation also at Johns Hopkins. There's a children's hospital affiliated with Hopkins, and she always was present for their grand rounds and so forth, and that's the way she kept her toe in the door, sort of, of academic pediatric surgery.

EHRHART: I have a list of questions that I'll be asking you. Hopefully you had an opportunity to review them, I sent them.

KOOP: I did.

EHRHART: The first set of questions I'd like to ask you are about her residency. If you're uncomfortable answering any question or you prefer to discontinue that's fine, just let me know. The first question is about her residency. A lot of this information is based on your autobiography. You had mentioned in your book that Doris Bender was your first surgical resident. And Dr. Schnaufer was also mentioned as one of your residents. But in your book, at least, no other women were mentioned. So of your 35 residents that you had, how many were women?

KOOP: When I defended myself before the confirmation committee to be Surgeon General of the United States, and the United States Senate, I made the claim that I had trained more women in pediatric surgery than any other living person. No one ever refuted that claim, and I'd have to go through them: Bender was the first, Louise Schnaufer was not the second, it was Gretchen Beeber, and then Rowena Spencer, Mary Marlene Schwab-Jones, Louise Schnaufer, and no one who has been in the training position I left has trained any women since I left.

EHRHART: So why do you think that having women pediatric surgeons was common or uncommon during that time, the late 1950s?

KOOP: Well it was uncommon, there's no question about that. I think people have a lot of peculiar ideas about why certain people choose certain specialties. I think that it is their temperament primarily that guides them into a field of medicine. I think that pathologists have different personalities than pediatricians, and pediatricians and surgeons, and surgeons and psychiatrists. I would say that Louise had a surgical personality, which is being very inquisitive. Being in a mode where she has to answer many questions in the course of a day. And surgeons probably make more decisions minute-by-minute than any other part of the medical profession – should I cut here or cut there, or should I snip this or snip that? She suited that sort of life very well and she was very much at home in the operating room surroundings. In addition to that she was also very much at home with children, and that would have made for most people to say, "Well, she should be a pediatrician." I think she had very remarkable manual dexterity and that she belonged in something where she could use those skills and pediatric surgery was a remarkable opportunity, I think, for women in those days, as it is now. There are many more pediatric surgeons who are female at the present time than we would have imagined back in the times when she was training. I don't think there's anything special other than that that makes up a pediatric surgeon. They're really a doctor first, a surgeon second, and a pediatric surgeon third.

EHRHART: My next question is about selecting your residents. Did you have an opportunity to select which residents you worked with?

KOOP: I always selected my own residents. The technique that we used was have a committee of people in the hospital, not all surgeons, who would interview the candidates, who would then screen, so to speak, the ones that they thought were worth a second look, and then I would meet them. I had two peculiarities that I developed over time because of necessity. One was, I should preface this remark first by saying I don't know of any more intimate association between trainer and student than in pediatric surgery. The major difference between treating you, your size, your weight, and a 3.5 lbs. baby has to do with the frequency with which you keep tabs on that 3.5 lbs. baby. You have a tremendous amount of reserve in the body that you have. I could operate on you in the morning and turn you over to the nurses in the intensive care unit, in the recovery unit, and not really see you until mid-afternoon and feel perfectly comfortable that that was good care for you. I wouldn't think of leaving a newborn baby that was premature for more than 45 minutes without seeing it again. That meant that when I trained a pediatric surgeon as a resident, that person and I lived very closely together, a lot of it long nights operating and then sitting around an intensive care unit trying to be sure that things are going to go okay. And so when you know the kind of intimate relationship that the trainer has with the trainee, it makes a little better sense what I'm going to say.

KOOP: When I had had a little experience with appointing residents and seeing how they developed, I realized that one of the real keys to success was what kind of a spouse they had. A spouse can make a tremendous difference, and pediatric surgery has a special thing that I should describe to you. Let's make believe that you are married to a doctor and he has decided to go into surgery, and so you swallow a couple of times and he tells you that that's a five-year job anyway and maybe two years in the dog labs, so seven years from now, not much money, not

much time at home, and if you have children that's less time to spend with them. And then he gets enamored of pediatric surgery along the way, and someday he comes home and says to his wife, who has been putting up with the five- to seven-year thing, "I think, honey, I'm going to take more two years of pediatric surgery," that is really a blow. I mean because if you figure how old they're getting, and the people that they know have moved on to do things and they're now making money and they have a family and they're just starting and have two more years to go, it can really stress a marriage. So what I began to do was interview the wives of the people that I thought were worth a third look. With Louise, who was unmarried, I didn't have that problem. And, in a sense, and I have to be careful how I say this to you, in a sense that Louise didn't have any family obligations, made her an absolutely marvelous person to have in pediatric surgery, because her life became pediatric surgery, and her life really became the intimate training of the residents that followed her and the patience that she had was exemplary. Surgeons love to operate, but they don't really like to operate with a resident who doesn't know what he's doing and stand by him for an hour and a half to do something they could do in 20 minutes. But Louise never had those problems. And she ingratiated herself to the residents so that it's easy to say that no resident I ever had was more appreciated than Louise Schnaufer, and there was a real affection that grew between the residents and Louise. I would say about half of them, in the latter half of her tenure with me, called her "Aunt Louise." And really, she was part of family.

KOOP: The other thing I did that was peculiar, I would not appoint anybody from a foreign country who wasn't already married. The reason for that is that so many times I would arrange with somebody, say in India, who had a huge field of pediatric surgery that had to be plowed and taken care of, and I'd make the arrangements to bring that person to the United States, have to take a little more time to adjust to the culture of our country, train him to be a pediatric surgeon and then just before he was to go back and do the Indian job that I trained him for, he'd marry an American and stay in the United States. And that's not what I was training foreign students for. So the other thing I did was to -- I had a rule, I told them flat-footedly – if you're not married to a national of your own country, I don't consider you for training. That didn't apply to Louise, but those are the two things that I think were somewhat unique about the way I appointed residents – one was the foreign element and the second was to be sure that the wives were on board and were suitably stable to be able to take – it's a rough separation from your husband for that length of time.

EHRHART: My last question pertaining to Dr. Schnaufer's residency goes back to your book, in which you explained that Dr. Schnaufer assisted you in the separation of the conjoined twins. In addition to that, Dr. Bishop in the Children's Hospital publication called *Children's View* published in 1992, said that during this operation Dr. Schnaufer was "far from an assistant." I was wondering how was she "far from an assistant" during the operation?

KOOP: I can tell you several things. First of all, I don't know what goes through your mind when you hear that a surgeon had an assistant during an operation; there's only one captain of a ship during an operation and that's the surgeon. He makes the decisions and they overrule anybody else's at the operating table, including the operating room nurses and the anesthesiologists. He is the boss. Many times you delegate that to people because they have skills equal or better than yours, but that's the rule. But there is what's called the "first assistant"

to every surgeon, and in a field like pediatric surgery, where I've been telling you about the intimacy between a trainer and a trainee, that assistantship is not just at the operating table but it's getting ready. For example, the Siamese twins that I separated with Louise as my quote "assistant," we did dress rehearsals, we had the two operating tables facing end to end, we had the 15 members of the surgical team there. We had them scrubbed and we had two dolls and we went through what we were doing – "and this is what you will do here -- if this happens do this, if this happens, do this, if this happens, don't do this and don't do that," and she took part in all that planning. So it's not the least bit degrading to call somebody a first assistant in surgery, in fact, it's like saying someone is your first mate.

KOOP: But the other thing that Harry Bishop might have been referring to, and I have referred to it elsewhere -- if you put all the things in a memoir that you want to put in, it gets to be like the Encyclopedia Britannica and there are a lot of things that I would like to explain as I go along but editors don't like that, so the reason I don't write more books is I've never found really happy relationships with editors. Anyway, when we separated, the first set of twins that we separated were handled in an entirely different way than all the others. Siamese twins in this country get a tremendous amount of play. Separating Siamese twins really isn't nearly as difficult as a lot of other things that we do, but it's spectacular – esoteric. The twins that I'm talking about came down from New York to me, referred to me specifically. Well that, if you know anything about surgeons' pride and other things, that ticked a lot of people off. Why would anybody send twins from the great city of New York to Philadelphia? The reason that they gave was the surgery is better for children. That's why they came, and that's why I guess they did well. They were joined sitting on each other's laps, and there are two ways you can do that. You can sit on each other's laps with two pelvises meeting pubis to pubis, or it can be open and you have half of a double pelvis for each child. The latter is much more complicated. And the second thing that was important about those twins was not that they came from New York, but that nobody knew anything about it. When one of those twins was married, in a big wedding, the only people at the wedding who knew that she was a separated conjoined twin was the bride, the groom, her mother, her father, my wife, and me. It's quite different than these things, you know, what's in the paper for two weeks before and three weeks after.

KOOP: When we separated the twins, then you have the reparative work to do on both of them, so that we had it arranged that as soon as the twins were separated, Louise would carry one into the other room adjacent to where I was working. I would continue to start to repair twin A, and she would start to repair twin B. As she crossed the threshold from operating room A to operating room B, the baby had a cardiac arrest. She screamed for help, and by the time I got there, she already had the chest open and the heart we are talking about was that big, and she was already doing this to it to keep it going. So that might have been what Harry meant when he said that, I don't know. But she certainly saved that baby's life and made it possible for her to go on. It's interesting, I've often wondered whether there was any connection – these kids, they were just two normal girls. I should tell you that when you have girls hooked up like that, they are very complicated inside, because they have one rectum, four vaginas, and the kidney over here drains urine into this bladder, and this kidney drains into this bladder, so it's fairly complicated to do the reparative work. And one twin always seemed a little behind the other in development, and so when they were five, they looked like one was four and one was six. Eventually she was diagnosed as a "blue baby," which is tetralogy of fallot, a congenital anomaly, and one of the

earliest congenital heart problems that was attacked surgically. It made Alfred Blalock a famous surgeon at Johns Hopkins and Helen Taussig was the person who was the cardiologist at Hopkins who worked out all the details about how the operation should be done. Anyway, the little girl who'd had her chest open on the operating table and massaged this way had the surgery, went through the surgical procedure beautifully. She was sitting up in bed on the fifth post-operative morning eating corn flakes and she had a cardiac arrest and was dead before anybody could do anything. I could tell you that every set of Siamese twins I've worked with something like that's happened. It's not a really joyous life afterward. The emotional investment that's made by so many people on those two kids is unbelievable, and when something happens to one of them, it's like the world comes to an end.

EHRHART: And that was the conjoined twins separation in 1957?

KOOP: Yes.

EHRHART: Did you want to make any other comments regarding Dr. Schnaufer's residency with you before we continue onto when she came back to CHOP after 1971?

KOOP: Well, she impressed us, the staff at the hospital. Let me tell you what I mean by that. I would train somebody like Louise, and while they were looking for a place to go for a job, Louise didn't have that problem because she went right back to where she came from. While they were looking for a job, I would frequently appoint them as a surgeon to the Children's Hospital and they might stay with me two, three, five years, and then move on to Akron, Ohio, or Salt Lake City or something like that. So there always were three or four people like that on my staff. Louise impressed all of us enough, without our ever discussing it, I mean I never remember sitting down and saying, "boy, how are we going to get along without Louise next year?" But I remember that when one of those people that had been with me for five years and that I wanted to really take my position when I left, Dale Johnson, who eventually became the professor of pediatric surgery at the University of Utah and the surgeon-in-chief at the primary children's hospital in Salt Lake City. When he announced it – he's a Mormon and you know when Mormons get called to Salt Lake City they go, they don't stay anyplace – and so when he was called to that job he went and left a spot that we needed to fill. All of us, especially Harry and I, the first thing we said, "Let's get Louise." And never having discussed it, neither Harry nor I had ever discussed it with each other "What are we going to do when Dale Johnson leaves us?" but the day that we had to face the fact yes, he's going, and we've got to replace him, Harry and I both said to each other sort of, "Hey, how about Louise?" And I called Louise on the telephone that same day and I started to explain, I said, "You know Dale Johnson is leaving, and we have an opening," and when I got far enough along so she really understood that I was going to ask her to come, she said, "I'm coming, I'm coming, I'm coming!" So she was as anxious to come back as we were to have her.

EHRHART: Can you describe some of the characteristics or talents that you saw in her?

KOOP: Well, I've already mentioned she had the necessary manual skills. She instilled confidence in families, which is, I would say of maybe 10 or 12 virtues you'd like to see in a pediatric surgeon maybe is most important. She was a diminutive little girl, you know. Right

now, I would say she's probably just about 4'11 or something like that. She's not an imposing character. But when she came in in her scrub suit and said, "I've just operated on your child" and this and this and that, families felt totally and wonderfully reassured. I've mentioned her patience, I've mentioned her manual dexterity, I've mentioned her ability to be devoted to the specific training of residents, which is a boring job, but which she never seemed to be bored with, and which was really what endeared her to the residents. The most common operation that you do on a baby is a hernia. Just to give you some idea of how many there are, I did 17,000 hernias when I was at Children's Hospital. They took me on the average of six minutes. Well the first time a resident does a hernia it'll probably take him an hour and a half. Well, if you know how to do a hernia in six minutes you can get very tired of watching somebody fumble his way through his first hernia. But Louise did that with aplomb; that is what endeared her to the residents and what took tremendous burden off all the rest of us because she was happy and willing to do it and that left us to do more exciting things we thought.

EHRHART: Were there other ways in which you would describe her relationship with her residents to be unique compared to other surgeons at the time?

KOOP: Well, first of all she was a woman in what's considered a men's specialty. You know sometimes you have certain ethnic groups, and when people are saying "Oh, he's great for a so-or-so, or for a Cuban or something, he's done very well..." Nobody ever said, "For a woman, Louise has done very well." I never heard anybody say anything comparative about her that would have led anybody that listened to believe that anybody else thought that she was less good than anybody we had. She got to do certain things – you know there are certain things every surgeon gets to do better than another surgeon because he happens to see more of them and gets used to it or maybe he invents something new and so on. And Louise was particularly interested in Hirschsprung's disease, which has another name called megacolon, and these children are unable to move their bowels because of a neurologic defect. It can be corrected surgically, you can't correct a neurologic defect, but you can hook the bowel up in a different way so that it works. She became quite skillful at that and had a huge practice. Another thing that endeared her to me is that she never grumbled about reporting on what we did. It's an obligation of people who have the opportunity that we had at a place like Children's Hospital to see a great many things that nobody else sees to report on them and how they go. That's hard work – that means digging up the records – they're always lost, finding the patient – they always moved, and get it all together and then bring them in and assess them and assess them honestly and write up what you've learned in such a way that somebody else who knows not as much as you do, but something that you do, can benefit from it and become skillful at what you do, and she was always willing to do that. I don't know how many papers she eventually wrote, but a lot of the papers that the rest of us wrote she was a co-author on and made a major contribution to it.

EHRHART: What about her guidance and relationships with her residents outside of the operating room, outside of a formal scholarly setting?

KOOP: I guess I haven't described the life a pediatric surgeon – we don't have any social life. Louise loves to go to a social event, she loves to go to a party. My family, we sort of adopted Louise and she spent holidays with us, and Thanksgiving and Christmas dinners, and things like that. She had a condominium on the ocean, down in Maryland, and my family, including my

children and their children, spent their vacations there, so we had a very intimate relationship. I traveled many times, Louise was sort of hesitant, a lot of pediatric surgical meetings are international, and they're in places like Bangkok, and Louise would be hesitant to get on a plane, and go all by herself to Bangkok. So if my wife and I were going to a meeting, Louise would go along with us. When she was in Baltimore she used to do the same thing with Dr. Alex Haller, who was then chief of pediatric surgery at Johns Hopkins. But then also Louise and I used to go places, sort of like quick trips, not associated with a vacation or anything. And the sort of parent organization of pediatric surgeons, there's the British Association of Pediatric Surgeons, they have an annual meeting, and it's usually on the three-year cycle – London, some other British city, and then another European city. A couple of times we strayed as far as Poland, and places like that, and they were strictly working meetings and so forth. Louise would very frequently accompany my family or some other pediatric surgeon's family. But we didn't have the kind of lives where we were party people, there's just not the time. And when you have a night that you might go to a party, you're so tired you want to go to bed. But Louise did, on occasion, in addition to the condominium I told you about in Maryland, she had a lovely home on the Elk River in Maryland. She would have the operating room girls down there for a weekend and that sort of stuff. That's about the extent of our social life.

EHRHART: What made Dr. Schnaufer your closest associate?

KOOP: All of the above. Her constant availability. Something I should have answered I'll go back and answer it now – you asked me how I chose -- you didn't really ask me how I chose people, you asked me for the technique, but you didn't ask me what I looked for. What I was looking for when I interviewed 20 people for a specific job, I wanted somebody that in the intimate relationship I described to you, would be fun to be with and would be fun to teach. You know, there are some people that, as a teacher, are just no fun to teach them at all, but there are others that lap it up and you feel "this is what I was made for, and this is what teaching's all about." And I would say that if anybody did anything, you know, a little surprise for Louise – in spite of what I've said, we had a lot of fun in the operating room and so forth – but any accolades that ever came Louise's way were always associated with her teaching ability, and it goes back to her patience for being able to stick with the neophyte and take the time to hone him to a finer level.

EHRHART: Regarding her residents, I've heard from Dr. Templeton and some other people that people would seek her counsel, not only about medical procedures, but also about life-related events or situations...

KOOP: Remember that everybody that comes to us is topping off what I told you is a long, arduous training period, and now their next step is going to be the place that probably they'll spend the rest of their lives. In the early days of Louise's time with us, there were not many opportunities. Medicine has changed, unfortunately, I think, to be much more of a business than it was a profession. One of the things that happens under those circumstances is that hospitals become competitive with each other, and if hospital A down the valley has got somebody who does pediatric patients and they're attracting children to that hospital, that's money in the bank for that hospital, whereas a hospital up here which doesn't have anybody with those skills notices the difference and so they get somebody with those skills. So that now, if you look in the back

of a pediatric journal, you'll find all sorts of jobs available for pediatric surgeons. That was not the case back in the days of Louise's residency, she would be considered very fortunate to have already arranged to go back to Union Memorial in Baltimore and establish her practice there; her family came from Baltimore and it was a natural for her. Of course she became an adopted Philadelphian very quickly.

EHRHART: You had mentioned in your memoir that you never could have done it without Dr. Schnaufer, and that's from page 122. You specifically refer to her skills, support, and spiritual empathy. Do you have anything you'd like to say about spiritual empathy in particular, or any of the other items?

KOOP: I would say that our values were the same. What we would list as virtuous behavior for a pediatric surgeon would probably be the same list. I am a very active Christian layman, and Louise fit right into certain parts of my life like that. I mentioned India before, I mentioned training somebody and the disappointment you get when they decide to marry a girl here and not go back to India, which you and others were preparing 10 years to get this done. I sent, I say I sent and that's really what it was, I just had to tell her about the opportunity. In one of the Indian places where we had been disappointed by the surgeon marrying a lab technician and giving up the whole future he had there for which they had been preparing, which we had been preparing him, they were so disappointed I suggested maybe Louise would like to go and spend a few months out there – sort of take the curse off the disappointment. And she went. It was unusual for her to go – I told you that she didn't like to travel alone and so forth – but she went, she did a tremendous job – people still talk about it and she enjoyed it. I never had to coax her to do things like that.

KOOP: Some people have referred to me as the "father" of pediatric surgery, that's not true, but I think I was the best salesman for pediatric surgery, and I did that all over the world and that meant I traveled a great deal and that meant I had to leave my particular practice in somebody's hands where they were capable and willing. Where I knew that not only would skillful work would be done necessarily on the patients, but that their families would be comfortable having somebody other than me take care of the child. So Louise filled in for me many, many times on things like that. When I say I couldn't have done it without her, I never had that close a relationship with any other member of my staff. Put it another way, you know you sort of go hat in hand to some people and say, "I have to go to Bombay, would you mind?" You never have to introduce the subject to Louise, you'd just say, "Louise, I have to go to Bombay, would you cover me for so-and-so?" "Oh, sure."

FILE: KOOP2

KOOP: I wrote a book in a day one time, I had all kinds of backups. I think there were four different ways it was being recorded at the time. Louise and Jack Templeton were both in on that. I was making rounds one day, and the child had something in the neck and I was going through the differential diagnosis and how you tell this from that and this from that and so forth. One of my residents said, "You know, you do that so well, and the average pediatrician hasn't the slightest idea what you're talking about. Have you ever thought of putting it in a book?" And I said, "Well, you know, I know it so well, I'm sure I could probably do the book in a day."

I said, "I'd have to have certain qualifications." So I said, "I've got to have somebody who's very close to me in training" and that was Louise, and Jack Templeton, I think he was the resident at the time. I said, "I've got have a lot of coffee and a lot of Bavarian pastry." We started at 8 o'clock in the morning I said we'd be finished by 5. And we were. Published a book -- made a great mistake in what I called it. If you don't have experience, you can make huge mistakes. That little book should have been in the pocket of every medical student. And the title would scare you away. I wanted to call it "Lumps and Bumps in Kids," which I think would have been a best-seller, if it was published as a little paperback, you could put it in your pocket. It dealt with everything that you can see and feel, from the top of a child's head to the sole of his foot. Nothing about inborn errors of metabolism or what's in the heart, but if you can see and feel it, it's a lump and a bump, and treat it: "This is what it could be, and this is why it isn't nine of the 10 possibilities," it had things set apart in italics. It was designed so that had a pediatrician who had a kid in his examining room and found a lump in the neck, for example, in the time he said to the mother "He can get his clothes on now," he could go around the corner and find everything...and appear to be a genius. What I got finally pushed into calling it was "Visible and Palpable Lesions of the Newborn." Doesn't sound too sexy.

EHRHART: No, it doesn't. They were trying to make it more scholarly?

KOOP: Erudite, yes.

EHRHART: Well, can we hop back for a second, because I'm sure your schedule is very busy and I don't want to infringe upon your time beyond our appointment time. When Dr. Schnaufer came back to Children's Hospital in the early 70s, did you notice whether or not she had changed or grown from the time of her fellowship, and if so, how?

KOOP: She had grown in the way every surgeon has to grow, and that's in confidence. When you think of the amount of stuff that we pile into what's really a youngster's head, and coming on top of five years of having done it in general surgery and now doing this and then going out and having all the economic uncertainties that are starting, all the social uncertainties that are starting, all the competitive uncertainties that are starting, you have to mature or you don't make it. And she certainly had done that. If you watch certain people in certain professions mature, there is something else that happens to them at the same time, they get arrogant. Arrogance is not one of the virtues of being a surgeon, but it's unfortunately one of the common characteristics. She was nothing like that at all. And so I would say that she had matured in all the proper ways, but in no way was she arrogant or pushy or overbearing.

EHRHART: Another question that I have is: It's been written that Dr. Schnaufer, along with you and Dr. Bishop, performed progressive, or new, surgical procedures, such as repairing infant hernias, which is what you had mentioned earlier. How did you work as a team to develop and support each other in the development of these new procedures?

KOOP: Well, it's a slow process. I'll give you two examples. You might do a thousand hernias, and do them the same way, and as you do develop them, you try something different, you like it, you add it to the next operation or delete it from the next operation. And in the operating room, the operating room will say, "Oh, you know what Dr. Schnaufer's been doing

lately, do you want to try it?" or "Dr. Koop has done this and has eliminated that, want to try it?" Then we have two kinds of conferences -- we have the daily rounds that we make in each other's presence and talk about what we did, and then we have what are called grand rounds, where we sit and conference and present specific patients and talk about them. I'll give you a perfect example of that. You hear about people being born with cystic fibrosis. It's a very common thing, and it's a terrible problem for kids. Most people who have it and have it diagnosed when I was first in surgery if they got to be teenagers that was pretty fortunate. Now they get to be 30 and then they usually succumb to some pulmonary complication. All people who have that might have a newborn manifestation of it in the form of intestinal obstruction. They lack certain enzymes, which make the content or, there's stool in the newborn intestines and it's called meconium, and it ordinarily is about the thickness of pea soup. When you have cystic fibrosis, it's like rubber. And if you take a piece of stool out of the colon, for example, and you bend it like this it forms a "U" and as you watch it comes right back to the original shape -- it has a memory like plastic does sometimes. This is a terribly difficult thing, because these babies always have pulmonary infection and they always have other problems, but you've got to get the intestinal obstruction taken care of. And they're not the kind of babies you can do a lot of operating on. So we would discuss this every time we had one and so forth, and I suppose we discussed that 15 times; "what would happen if we did this, have you ever thought what would..." Then one day Harry Bishop got up and drew on the blackboard, and he says, "we've been doing it backwards, suppose we did it this way," and that was the birth of the Koop-Bishop Procedure. Bishop-Koop Procedure. And so that's the way things happened.

EHRHART: He did tell me about that procedure, not exactly in that detail, but he did mention that when I interviewed him, so thank you for...that's great that you both talked about the same thing and how you would conference and develop the procedures and support each other.

KOOP: And those are things that happened over and over again. When you have something like Siamese twins, and I told you I think the most important thing about Siamese twins is the dress rehearsal. Because you get 15 people doing something they're going to do once, and the most important thing is to get two living children, and it's very difficult to get two living children, and there are all kinds of problems that happen that you don't expect to happen, and of course an event like the cardiac arrest on that little baby I told you about. And if you go through with everybody that's going to be there, and you do it say, maybe three times, and say, "If this happens, do this, if this happens, be sure you don't do this...." Again, you have to have a ringmaster saying.... But that's the kind of pre-planning that makes a successful surgery.

KOOP: I'll tell you a little anecdote. The present individual who is now being examined by Congress whether or not he will be the commissioner of the FDA is a surgeon from Houston of German ancestry, and his name is von Eschenbach. Von Eschenbach was once a medical student at the University of Pennsylvania. In his first assignment in surgery he was assigned to the Children's Hospital where I was the boss. And so we were standing, operating, in the operating room – I designed the operating room so when you were at the sink scrubbing, the wall was glass and you could watch what was going on. I don't know how many lives it saved, but it saved some. For example, the split-second that it took Louise to open that baby's chest and get the heart going – we wouldn't open the chest today, but we didn't know how to do it on the outside before. But I've seen children have cardiac arrests as I was scrubbing my hands and I went

through the door in less time than it takes to talk about it, and in the old days had the chest open and was massaging the heart and so forth. Well, von Eschenbach and I were standing there, scrubbing, his first time ever scrubbing. I said, "What are you thinking about?" "Oh," he said, "I really don't know, nothing much." And then he said, "What are you thinking about?" And I said, "Well, I'm thinking about what I can plan now that's going to take place in the next hour and a half, and keep myself out of trouble."

KOOP: Skip now years ahead, he's on the board of the M.D. Anderson Hospital, he's a surgeon there, and he's already been appointed by President Bush as the director of the National Cancer Institute, and he and I are both at George Bush Sr.'s home in Houston for a reception in association with some of the work at M.D. Anderson Hospital. Barbara's away, Senior Bush is acting as the host. The bell rang at the door, and he went and opened it, and then he came back, and when he came back, von Eschenbach and I were standing there talking. You may remember that the senior Bushes had a child who died of leukemia, and it died at the M.D. Anderson Hospital when von Eschenbach was a young resident at that time, so he got to know the Bushes at a very vulnerable time of their lives and they're good friends. So the President came back. And Bush was the closest political friend I had when I was working for Ronald Reagan. So as the elder Bush came back, von Eschenbach said, "Mr. President, you might be interested in what we're talking about." Then he recounted this story that I just told you, and he said, "What I want you to know, Mr. President, is that I live that moment over again every single time I go to the operating room. I never scrub my hands without thinking of Chick Koop and when he asked me 'what are you thinking about.' I was thinking about stupid things, and he was thinking about how to save the kid's life." He said, "So that's what I think about every time I operate." Interesting about teaching, you never know what a very small thing changes somebody's life.

EHRHART: Can you describe how Dr. Schnaufer would conceptualize and approach novel procedures? Was there a particular way she conceptualized?

KOOP: Yes. The way Louise would introduce things to me, she'd say, "I was talking to so-and-so at the meeting in Cincinnati yesterday, and do you know what they do when they do x procedure? They don't do x and x..." And I said, "Have you ever tried it?" and she would say, "No, no, but I'm going to try one tomorrow," and I said, "Let me know how it goes." So she would come back and say, "This is what I did and the refinement I made was to do so-and-so and so-and-so." And I'd say, "Well you know I have one next Monday, will you scrub in with me and show me what you did?" And how did that grow more amendments to the Constitution? That's the way we worked pretty much, and the one thing that was sort of different about Children's Hospital of Philadelphia – hospitals have personalities, you know, just like people do. I didn't train Harry Bishop, he was trained in Boston, the same place that I was sort of trained. Harry does everything just a little differently than I do. Not a significant difference, but just a little differently. We both get great results. Many chiefs, which was my position, would say, "I don't want anybody doing this in an operation, I want you to do it my way. I want all the hernias that are done, need to be done this way." I never dictated to a competent surgeon that was trained differently than I was that he had to do it my way. I think that was one of the things that made our fellowship of surgeons sort of a happy circumstance. And we willingly shared, and we didn't -- if I had an idea that what I was doing in procedure x was better than Harry Bishop or Louise Schnaufer or Paul Mellish....or somebody else, I would try to convince them at one of the

conferences, "This is what I've done. I've kept record of the last ten cases and this is what's happened." Many times they'd say, "I'm going to try it." That way I think that we were able to capitalize on each other's innovations without ever having any bombastic rules that "You're gonna do it my way."

EHRHART: Now you, Dr. Bishop and Dr. Schnaufer worked closely together. Was there anyone else you would include as part of that "team"?

KOOP: We never had anybody else that stayed longer than say about five years. But there were people that stayed for five years or so and then went on to do their thing someplace else. Names that come to mind: R.W. Paul Mellish was a British surgeon who was in the RAF during World War II and wanted to be trained by an American surgeon and to live in this country doing pediatric surgery. So I trained him, and he stayed with me for, I guess 5-6-7 years, and then he came up here to Vermont and was the chief of pediatric surgery here. Verhagen was a man I brought over from, at the end of World War II, I brought over from the Netherlands and he reestablished himself in this country. He worked with me for about that same number of years and then he went to Akron, Ohio, and joined a man named Schaffer and they had a very good pediatric surgical clinic, which Schaffer still operates, van Hagen is now retired. Charles Minor was trained at the University of Virginia in surgery and had a couple of months at the Children's Hospital in Boston, and then had two years with me, and after being with us I guess for 10 years, he moved down to Wilmington, Delaware, which is the closest children's hospital to us outside of Philadelphia, and he became the chief of surgery there at the DuPont Children's Hospital. One of the most illustrious of my graduates was the man I mentioned that Louise replaced, Dale Johnson, who went to Utah and the primary children's hospital there, and he has just retired. I celebrated my 90th birthday last weekend, it's early for my birthday, but they did it that way so people could come. One of the surprises for me was that 15 of my residents showed up for breakfast, and then later in the day six more joined us. It's amazing how many major posts in pediatric surgery around the country, various universities and children's hospitals, those people filled. The other thing that's amazing and really makes me feel 90 is how many of those people have been retired for quite a while. It's amazing. It's hard for me to believe that my children are approaching 65.

EHRHART: I have two more questions that are on my list, but if there are other comments you'd like to add, you're certainly welcomed to do so. The next one is that pediatric surgery was considered a fledgling specialty for a while. How do you believe, if you do believe that, Dr. Schnaufer contributed to its development and legitimization?

KOOP: Well, I think if you wanted to specifically look at Dr. Schnaufer's contributions, her teaching of residents would be absolutely number one. She put the finishing touches on...every one of those 15 people around the breakfast table I would say bears her stamp, which is patience, perseverance, meticulous attention to detail. And one of the things we haven't even touched upon, I'll give you an example. We won't put this in the memoirs, but one of the most famous surgeons in America today is Judah Folkman, he is at the Farber Institute in Boston, the Children's Hospital in Boston, and he is the guy that discovered a substance called the angiogenesis factor. The angiogenesis factor makes blood vessels grow and a tumor can't grow without new blood vessels. So a lot of the world's future development of cancer and anti-cancer

understanding will come from that. Well, he was appointed as one of the outstanding surgeons ever graduated from the Mass. General Hospital surgical program; he was appointed as surgeon-in-chief at the Children's Hospital of Boston, and he is the only full professor that Harvard ever sent away to be trained, after being appointed, and he came to me. Whereas I had most people for two years I had him for only six months. But here he was, the hotshot, the number one guy in the Boston family, and certainly in the rising stars at Harvard, he was it. And so he came down, and in the first week he was there, I think it was Thursday afternoon, I didn't have any other things to do, and I had a little boy with two undescended testicles. That's one of the several operations that bears my name, the Koop orchiopexy. It used to take me 17 minutes per side to do an undescended testicle. So I did one side. It took maybe half an hour because I was telling Judah Folkman everything I did, why I did it, why I put this, why I did it this way, why I held my hand this way, and so forth – things that a surgeon would understand and be able to adopt right away. And then I said, "Your turn, you do the other side." Well, an hour and 45 minutes later, I didn't think we'd ever get the kid off the table, Things were in shreds. A hernial sac is 31thousandths of an inch thick, it's not very thick, but it's got a lot of tenacity to it.

KOOP: The point I'm trying to make is, in spite of the fact that he was the top-flight surgical graduate in Boston, he didn't understand the difference between pediatric tissues and adult tissues, and there's a tremendous difference. That's why you just can't send any baby to any surgeon, because they just don't know how to handle the tissues. We finally got the kid put together an hour and 45 minutes later. Poor Judah was absolutely devastated. Very deflated to have all this hype about you and then being asked to do a very simple procedure in the new specialty that you're going to do and not only couldn't do it fast, but you couldn't do it well and you loused it up and somebody had to come in and bail you out and so forth. Well, the next morning he came in. My residents used to make rounds before I did, and then I'd go around with them and they'd tell me all the problems they found at night. So Judah came bustling in, he wasn't any longer depressed, and he kept saying "fingernails, fingernails, fingernails!" And he said to me, "hold out your hand," so I put out my hand, you see my fingernails are fairly long, and I cut them just this week, they were much longer. And Judah's fingernails were all down here. What he showed me that I didn't even know that I did, is when I did this operation, I took that little membrane I told you that tears so easily, and if you look through it there's the membrane on top, if you look through it, there's the artery that goes to the testicle, there's the vas deference that carries the sperm, and here are a bunch of veins. Well, you've got to separate those things from this membrane on top. Well, you get the membrane started to separate how do you hold this back, how do you hold this back? Well, what I used, I just put my fingernail here, and hold this little tiny thing back, and then I move it over, move it over, move it over and the whole thing takes a minute. And that's what he couldn't do. He went back to Boston, and the first requirement, all of his residents had to grow a thumbnail on their non-dominant hand so that they could do that.

KOOP: I edited the Journal of Pediatric Surgery, so I had the privilege of writing the editorials I wanted to and I wrote one on the advantages of surgical travel. I can give examples of people that do things that nobody else can do. And you know, that's very unusual. It's very unusual to find a surgeon who can do something that nobody else can do. But what you do is find surgeons who manage to do something, but they don't know what the trick is that they use, like I didn't realize my fingernail, and therefore they can't describe it to anybody. Just like Judah showed me

that one of the reasons I was so skillful at doing that particular operation was because I had long fingernails. I have seen, there's one occasion when I went to London to discuss a paper by a German surgeon, and he gave it to me to be sure the English was okay. He's a good friend of mine and I said, "Fritz, the English is great," but I said, "I don't believe a word of the paper, because I've done this, I've done exactly what you've described and it doesn't work. The patient is just as bad afterward as before. It couldn't be." So a little bit later, he showed me a film, he said, "Wait until you see my cinema." So I looked at his cinema with great intent, I didn't find anything he did that would account for his good success and my failure, so then I went and watched him do the operation. I didn't go into the operating room until he had the belly open and the retractors in and was starting to work on the bowel itself, so I didn't see the whole operation. Then two years later, he asked me if I would train his registrar, his resident, and so I took him for two years. And when I got to know him I said, "Now tell me what does Fritz do that I don't know about?" He couldn't tell me. Well, it's very simple, he didn't know he did it. He'd open the belly, and coming out of the bottom of the belly is the rectum, up like this, and what he wanted to do was to chop a piece out of the rectum where the nerve supply was deficient and put the two ends together. Well, if you do that down in the bottom of the pelvis, you cannot get deep enough to get the stitches close enough to the anus so that it works. But what he didn't know that he did and I never saw him do because it's not in the movie and I didn't come in at the right time of the surgery, when he starts the operation he takes four big stitches on four sides of the rectum and he pulls the whole pelvic floor up three inches and ties it to the retractors, so he's getting four more inches, about, of operating room. I've watched people there... I trained a guy in Japan who did some marvelous things with the biliary duct system, and I could never do them, and I went over to watch him operate and he did things he didn't tell us about either, didn't know he did them. That's the way it goes.

EHRHART: Well, my final question about Dr. Schnaufer is, I was wondering, what particular attributes as a woman did Dr. Schnaufer have that you believe enhanced her effectiveness as a pediatric surgeon?

KOOP: Well, that gets into an argument that I don't really always believe in. I don't think that female pediatricians are necessarily better teachers or have more empathy than male pediatricians when it comes to kids. And I would say that everything I've told you pretty much answers that question. What her personal attributes were, she did everything pretty well, from the surgery itself to explanations beforehand, to being able to comfort the family when an impending death was going to take place and that sort of stuff. A lot of people think that women can do that better than men; I'm not sure they always can. I prided myself on my ability to do that, and I thought I was very successful at it, in fact I even wrote magazine articles for lay magazines like the Reader's Digest -- what I tell parents of a dying child -- because I didn't think I had perfection, but I thought that I at least had enough so that I could raise the standards of what parents could expect and what doctors would do under those circumstances.

KOOP: So Louise – it's a word you don't hear much – but Louise was feminine. I mean there are a lot of women who aren't feminine. I think that if you get a non-feminine woman who's telling a mother how she should feel, it somehow grates on the mother because she says in some way "we're the same gender but we're different." Well Louise wasn't different. She wasn't married, but I don't think anyone would say, "Oh, that's just because...she can do that because

she's unmarried," or "I really wouldn't want somebody operating on my child that didn't have the empathy of a married woman." Well, I don't think that fit her at all. It's delicate ground because I think it's based upon premises that really aren't important premises.

EHRHART: Was there anything else that you would like to add that we didn't talk about?

KOOP: Well, I can tell you some little things about Louise. She had all kinds of potted plants in her office, it looked like a jungle, as a matter of fact. They so covered one whole wall of her window looking out on the Convention Center in Philadelphia was plants and it got to the point you really couldn't see out the window. The other thing that everybody knew about her and when they would come into her office – residents would come in to report something or ask a question – they'd all go over and open the bottom desk drawer on the right was filled with peanuts -- in the shell. She started buying them, there was a place right up the street from the hospital. Right in the middle of the black ghetto of Philadelphia, at the old Children's Hospital. They used to do fresh-roasted peanuts every day. As she was coming to work she would pick up some and dump them in the bottom drawer and it was amazing how fast they went. She always had candy around for people, again people knew where it was in her desk and would come in and chat, open a Hershey bar or something.

EHRHART: She was quoted as saying in one of the resources I looked at that you were also a fan of these roasted peanuts in her drawer as well.

KOOP: Did she say that?

EHRHART: Well, it was quoted, yes she did mention something in an article that was done about her.

KOOP: Do you know anything about Bison grass?

EHRHART: No, I don't.

KOOP: The name in Polish for a bison is Zubrówka and just like cats love catnip, bison love Zubrówka grass. It gets the name because they like it, and whether it's dry or fresh, it has a very pungent aroma. They make a kind of vodka in Poland called Zubrówka. So there's the same name for three things: vodka, grass, and a bison, all called Zubrówka. What you do is you get a bottle of the cheapest vodka you can get -- in Poland it costs about 60 cents a quart -- and put about a teaspoon full of sugar in that and one blade of grass. Put the top on. And after three or four days, you have a very pungent-flavored drink. And I noticed in one of the newspapers that reviews recipes and places to eat that there's a restaurant in New York that now is selling a Zubrówka cocktail made of apple juice and Zubrówka. Well, I did a lot of things in Poland. We trained the surgeon-in-chief of the children's hospital in Krakow and then we trained the anesthesiologist and then I went over and did the operation on the child that occupied the first intensive care bed there. It so happened that the surgeon-in-chief, the guy we trained, was a boyhood friend of another guy in Krakow, Poland, who got to be the Pope, the one who just died. So I came back from Poland one time with a sheath of Zubrówka grass. I used that all up, and then I found that there was a nursery in Ridgefield, Connecticut, where you could buy growing

Zubrówka grass, and so Louise, having a nursery right in her office, we had a pot with Zubrówka grass growing in it. And I used to call her on the phone and say, "How's the grass coming?" and so forth and my wife would say, "Don't say that, they'll think you're talking about pot!" So the one Christmas I decided that that'd be a nice Christmas present, so I got a lot of bottles and cheap vodka and then I had a label made. I made it myself and then had it copied. It showed a bison and it said "Made with Zubrówka grass grown in the sun-drenched windows of the Children's Hospital of Philadelphia." I gave that to my friends for Christmas. I went to buy some last year and I find that this is now something that the United States does not permit importation of Zubrówka grass, I don't know why, some peculiar characteristic I don't know about. But people there, and people in Polish neighborhoods, like Chicago, drink it all the time. I guess it's an acquired taste because it's like perfume.

KOOP: That's the only things I can think of. She, Louise, always kept a very nice, I told you about the two houses she had -- the condo down at the beach, and they were always very nicely appointed, and where she lived in town was always very tastefully decorated. And she had a pretty large collection of classical music, first on old records, and then on CDs; had a lot of books in her library. Oh, I can tell you a couple of other things about her. She was a remarkable artist.

EHRHART: I was going to ask you about her sketches.

KOOP: Not only a remarkable artist, but she lived, it was a fantasy world that she knew about, and she had characters just like Charles Schultz had characters – Peanuts and stuff. I had to give a lecture at Johns Hopkins one time on trauma and children and I told her I wanted the slides to be something different. And she put all these little people that were sort of like her family, there, and she, just like Schultz, you can ask her to do so-and-so she'd go right back and do it because she knows them, they're people, for her they're people. But she also does other things. She could do a reasonable portrait of your father sitting there in charcoal and you'd know who it was, and it wouldn't take her 10 minutes. I think where she is now that she does watercolors, she never did watercolors when I knew her, but these little people. In fact, I often have thought that if she had more time she could've done some children's books on these people because they're very real to her. They are so real to her that I'm surprised she doesn't go back to it. I haven't seen her for a while, but I talked to her the other day, and I was very impressed at how an ordinary conversation that you didn't get into medicine, you wouldn't know anything was wrong with her. I think she could do what I'm doing right now, but her cousin won't let her. You know all that?

EHRHART: Yes, I've spoken with him a few times. Did you want to mention anything about her surgical drawings? I understand that she also created sketches.

KOOP: She did sketches for me for that little book I told you about – Visible and Palpable Lesions – they're not diagrams, they're half diagrams and half drawings, but they get across to the reader the technical points that you're trying to make. An example is the thing where I used my fingernail, it's very well-depicted in there. And I don't know how many times her drawings have been published along with a surgical article, but certainly a couple.

EHRHART: So she also illustrated articles?

KOOP: Yes.

EHRHART: Textbooks?

KOOP: No, for journals.

EHRHART: Journals? Okay. Anything else you'd like to add?

KOOP: I'm trying to think if there are any other things.

EHRHART: While you're considering that I will put my second tape in.

KOOP: Oh, she's a good sailor. We owned a boat together. The three of us owned the boat: Louise, and I, and my wife's brother. My wife's comments make sense only if you remember that "Roots" was a popular book of the day, as was a motion picture made from it. The most prominent character in "Roots" was a slaved named "Chicken George."

[Interruption]

[Digital recording missed several seconds to start new file; refer to Koop 2 audio tape, tape is barely audible; undecipherable; Dr. Koop made several corrections to the transcript draft in order to complete the missing information.]

FILE: KOOP3

KOOP: My wife said...we were sitting around..."What are we going to name the boat?" And so she said it should be named "Chicken George" for "Chick" and "George." The reason for that is my name is Chick and her brother's name is George, so it's a play on words. And then the question was, "What about Louise?" So the dingy was named "What about Louise?" We sailed a lot. We kept the boat down in Tortola in the British Virgin Islands. Louise has sailed down there more than I have. Most of my sailing's been done in the Long Island Sound or Montauk Point. I think four or five times she's gone down in the winter for very hard sailing in the Grenadines. She kept a sailboat in the Chesapeake when she was in Baltimore.

EHRHART: Do you know where she learned to sail?

KOOP: The Chesapeake.

EHRHART: Or who, under whose...?

KOOP: No, I think that she had a friend, I don't even know her name, the friend, who was also a physician, and also was on the staff at Union Memorial Hospital, and they owned their little sailboat together. I was only ever out on that one time. But she handled it very well and I don't know how often she used it, as I say, because she was always busy.

EHRHART: Dr. Templeton related a story to me. He said that when I saw you I should maybe ask you if you knew about this. Apparently, you were scheduled perhaps to be on call on certain nights or certain times. He said that I might want to ask you if you were aware that there were often times that you were "on call" so to speak, and Dr. Schnaufer would tell them not to bother you and to call her instead. Were you aware that she did that?

KOOP: I've been told several times that that happened, but I don't know whether that was... when did she come to Philadelphia?

EHRHART: The first time, for the residency?

KOOP: No, the second time.

EHRHART: 1971.

KOOP: There are several sort of stories like that that people who tried to make life easier for me when my son was killed, and that was '68, but Louise was not there when that happened. But I mean it would be like her, it wouldn't surprise me at all.

EHRHART: Why not? Why wouldn't it surprise you?

KOOP: Just because she was a generous kind of a person, and we were very generally fond of each other. As they say, she was some sort of part of our family. I don't think our kids knew she wasn't related to us until, you know, they were fairly old.

EHRHART: Any other comments?

KOOP: No. If I think of anything, I'll add an addendum for you.

EHRHART: Ok. Today is September 19, 2006.

KOOP: It isn't, is it? Is it the 19th? I've been married 68 years today.

EHRHART: And this interview is with C. Everett Koop, and the interview was conducted by Mindy Ehrhart on behalf of the College of Physicians of Philadelphia for the oral history project about Louise Schnaufer, which is funded by the Foundation for the History of Women in Medicine. And also present at this interview was Paul Ehrhart, the interviewer's father.

KOOP: I don't know whether it comes up anytime, but I think one of the things that was very fortuitous in Louise's life...you know her father was in the Germany army in World War I. And they came to this country, and he, again very fortuitously, bought a city block in Towson, Maryland, and built on it a dry goods store, which became a department store. He died shortly after that, and her mother died shortly after he did, and Louise, therefore, was orphaned early and grew up very independently, which probably contributed a lot to her abilities to do things by herself and get them done. The income of the rental from that property got to be considerable,

and then as Towson grew, it got to be very desirable for other purposes and then was sold. And the point of my telling you all this is that Louise never had any financial pinches on the way up, so that if she wanted to take a trip and go to a surgical meeting someplace she didn't have to worry about funding it and that sort of stuff. And she was always very generous with the way she shared her two summer homes down in Maryland. That's about it.

EHRHART: I thank you for your time.

KOOP: Thank you.

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