Notes from Dr. Laligam N. Sekhar M. D. and Stephanie Haskins Meeting at Harborview Medical Center, Seattle, WA

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Dr. Sekhar: Mini-Medical School what I am told is that it consists of people who are not medical students but want to learn a lot about medicine. So they have actually a medical school UW has organized something like this -Mini-Medical School. All sorts of people, I know some people who work at Harborview are taking this. Mostly lay public. I've been asked to give a lecture to them and they call it "Miracles in Medicine" or something. I have been asked to give a 45-minute lecture and when Rosalie comes, I will ask for the exact date. I am going to be speaking about brain aneurysms and they told me that I am welcome to invite patients and some former patients. I am going to ask you and maybe one of your friends to attend if you like to.

Stephanie: Okay, I would love to.

Dr. Sekhar: It is not a must. But I am going to make it easier for you by giving you the actual Power Point presentation to you ahead of time. So, I am going to give it to you today. It will not have the videos in it. It has all the Power Point slides I will be using. I think there is some tweaking we have to do. But mostly it is there.

Stephanie: Who is it for? Who is it geared towards?

Dr. Sekhar: The lay public essentially. This is going to be

Stephanie: At Harborview?

Dr. Sekhar: It is going to be at???? Rosalie thank you so much. Who has that CD? Dinesh? It is obviously meant for somebody who has better than a high school education. I suspect many of them are professional people, or some are insurance executives some are lay public interested in medicine. They have taken a had a series of lectures. Comprising different aspects of medicine. This particular lecture of mine is one segment of it. You know. I just thought this would be useful to you for understanding the entire issue of subarachnoid hemorrhage and aneurysms. And some of the issues and some of the problems, etc. and by looking through it. So, that is what I want to tell you and when she comes back remind me to tell you the date and time and we can also send you an email as well if you want to come.

Stephanie: Oh, yea. I am very, very, interested cuz I have some things I want to ask you and some things I have worked on. This is my work editor. Essentially, she has boxes and boxes of

things. I would guess since my brain has finally come back to me. That essentially I would like to get towards getting this published. Maybe….

Dr. Sekhar: Hey, hey thank you. This is my fellow Dinesh. Let me just check and make sure and see if it is there. *Dr. Sekhar places the CD into the computer*. A title somebody suggested to me; which also gave me an idea is "Brain Aneurysms – A Survivor's Guide".

Stephanie: Laughs, Yea that is exactly right. And that is part of what we want to talk to you...

Dr. Sekhar: One of the things I thought that if this would appeal to you is something that you could do is to with permission and we can write letters to them ahead of time. You could interview a series of patients who survived brain aneurysms and treatment and talk to them and get their perspective and that might be useful to you in publication. It is not just your perspective but perspective from a number of people.

Stephanie: That's Yeap, good. So talk to me about the order, because you are really, really busy guy we know. You were going to show us this? (Referring to the CD).

Dr. Sekhar: I am going to give you this. (CD).

Stephanie: You are giving this to us?

Dr. Sekhar: I will show you what it has essentially and you can have it.

Stephanie: You know I feel really fortunate I knew the person who is famous and it would be him he has in fact saved many lives so…

Dr. Sekhar: *(Dr. Sekhar is reviewing the CD slides)* This has got a complete lecture. It is all on Power Point. This is the same lecture that I am going to give and for the most part pretty much self-explanatory. It is the exact lecture will be with narration. I will be talking and showing the slides. It is self-explanatory. I would say it is geared towards the primary care physician level. I do know what this actually shows… endovasuclar suite and endovasular treatment… endovascular cases… coiling, clipping, here is the operating room… we are redoing this video because we are not very happy with it. I want to show what the operating room looks like for those who have not seen What is a craniotomy and again redone this video and this is an actual aneurysm operation so we have a lot of information on this. It certainly goes into some results, other studies and how we approach different and show little of some of the statistics. Also, how many cases we do at Harborview and what are some of the outcomes.

Stephanie: Do you have total numbers? What is the total number on that one?

Dr. Sekhar: I think a three-year period you can see. At three and half-years 2005-2008 July is 600 patients. It shows the results. I think we need to put in here what is the explanation that is not here. The mRS 0-1 means perfect. You would be rated at the mRS 2. That means the person has not returned to previous employment but is taking care of everything else.

Stephanie: Okay. I stopped at the school I worked with, Aki, and lots of people came up to ask me if I would come back and could they hire me. Here is the thing, I think I could do the kinds of work I was doing, but I am so passionate about this. I made some deals with people today how I would work with them and all that.

Dr. Sekhar: So you are theoretically you are probably – could be a mRS 1.

Stephanie: I think so.

Dr. Sekhar: We are conservative and we try to.

Mary: What is the percentage of mRS 1 on there?

Dr. Sekhar: 0-2 we consider it as good recovery. Ruptured aneurysm total that is 64% Unruptured aneurysm is 90%. One of the other things is that we grade you a grade 5 *(when you came into the hospital using the Hunt and Hess scale)*. That means it is the worst possible grade when they come in. And yet grade five patients what I like to emphasize in my lecture is that 35% of the patients totally recover. Very good grade. But that requires a lot of specialized care, but that is where our organization has really done remarkable. Our results are better than the international published data that is what the slide shows. This is the international trial *(showing slide on CD)*. Our data, results are better than the international trial. So this is some of the research and different things. So this I am going to give you this...

Stephanie: You are going to give us the computer, too.

Dr. Sekhar: Actually, you do not need the computer. You just need the CD.

Stephanie: I know okay.

Dr. Sekhar: You can take the CD and it is there.

Stephanie: Okay, so if in my writing do I need to get permission from you of any of that?

Dr. Sekhar: I think that for reproducing the cases you need permission.

Stephanie: Right, right.

Dr. Sekhar: For all the other stuff you don't need. All the other stuff is basically, perfectly available material you know.

Mary: What role would Stephanie play at the presentation?

Dr. Sekhar: I think nothing really, but fortunately what they said is at the end, if people want to meet some aneurysm survivors they're in the audience. I will ask them to identify themselves. They are welcome to meet and talk with them or something like that. That is all. I do not want to put anybody on the spot.

Stephanie: What does that presentation do for you? How does that help you?

Dr. Sekhar: Well, essentially what happens with these is all in a sense it is getting out the message in two ways. The more we can get out the message you know. We at Harborview the Center of Center really take care of a lot of patients with very complex problems and sometimes they are simple problems. The disease rate is simple. The condition may be very bad. Because of all the stuff we do there, the outcomes are superior to anything else in the community. A lot of people do not know about that. So sometimes hospitals are under pressure. Right now particularly in this economical climate to hold onto every patient who walks into the door and you know who comes in an ambulance or whatever. They don't always have the best interest of the patient at heart.

Stephanie: In other words they shouldn't have that patient at their hospital. They should refer that patient.

Dr. Sekhar: Exactly, they are not doing that. We had seen that now particularly with the current economic climate. A lot of hospitals are hanging onto patients they shouldn't treat… ten patients to fifteen to twenty patients in their place who will be nowhere as good as place that treats 200 or more. You know. So I think the more we get this message out to people and what happens we find is that if not then number one people are better educated and if it is not something that affects them sometimes relatives, friends, whatever. Another thing is that our executives from insurance companies and so on they get a lot of information from these lectures.

Stephanie: Good, good. That is part of the book and that is one section of that because in all the reading of this stuff more and more. I am just trying to tell this from my point of view and my story but unfortunately or fortunately, it connects to what children learn. It connects to what families expect for things and it doesn't have the best people here for example being referred. So that means there are people, whom we know what happens and that is outrageous to me. So that is a section in the book, too. Why you know I was lucky where I lived. Why I came here and you were here. There are people in Everett who don't get here. I am feeling like you could actually get a lot of response on some of these things from people. And then it really makes me crazy to think that this is amazing and we don't even talk about it and that is part of the book, too. And that it is anything we know about it.

Dr. Sekhar: Part of the problem is people they don't want to talk about it because they feel like they will be stigmatized. See Senator Joseph Biden, who had a ruptured aneurysm and was treated in Washington and he did well and had another unruptured aneurysm and it was treated. He is the vice president of the United States. Whether you are for him or against him doesn't matter. But the fact is he has reached a very high position. Right? But he doesn't say a word about what happened to him.

Stephanie: Which is why I'm... Why? Why?

Dr. Sekhar: Why? Why? He feels people will say, "Oh, he has had brain surgery therefore he is a cripple." People will think that. And yet here you have is a disease effect 1% of the

population. Aneurysm unruptured aneurysm effect 1% of the population. Even though ruptured itself is not that common is 10 per 100, 000 per year but unruptured aneurysm exist in 1% of the population, which means in a country of 300 million we have 3 million Americans afflicted by brain aneurysms. No one wants to say anything about it. Right? This is the reason.

Stephanie: Okay, we have brought some things we wanted. Is that okay? Let me say, I will give this to you in a second. I am going to start with where you are and we will finish with the last part. Um, do you know this person? Have you seen his stuff? *(Stephanie shares the November 9, 2008 article entitled, "Large Study Identifies New Genetic Risk Factors for Brain Aneurysm" published on-line by HHMI)* What do you think about what they are saying?

Dr. Sekhar: He is a very good doctor. I think yes a lot of genes that are being looked at. Actually, he is a guy who is working on genes. I think we are just started to discover some of the genes. It seems that this is a multifactor, multigenetic multiple gene involved so far. This is one gene identified.

Stephanie: I brought this for you. One thing I would like to have this and I will share that in a second. I would like to say that the goal here is to identify and prevent. I am really attracted to that. Then this guy we really like *(Stephanie shared Dr. Sekhar's bio-information from the U of W Neurological Surgery website*) you probably know. I put a whole chapter in the book which is that's you. You don't have to read it right now. But I would never want to write anything or say anything about you that in any way that you do not want.

Dr. Sekhar: I will be happy to read it. Do you have it electronically? Can you email it to me?

Stephanie: Okay we can do that.

Dr. Sekhar: I can even look at anything that it is not.

Stephanie: Or anything you don't like.

Dr. Sekhar: I can always say yea, no problem.

Stephanie: That is your copy *(Stephanie hands the chapter11 "Our Hero" draft to Dr. Sekhar*) this is the...

Dr. Sekhar: I am happy to take that. I have that one. *(Stephanie hands Dr. Sekhar the Overview of the Book)*

Stephanie: So, what we are looking at right now is what each of the chapters are. And part of the reason, I was a principal and I was a teacher and when I started this that over a year ago right? October 2007. I am very different than I was then. What we know in education and what we do is you really have to understand and look at each child. That is the mistake we make and we don't. In medicine I think you do. Okay that is the difference and I think the more we communicate about those issues the more we will get to a place where we should. Which means

you are not stuck and leave you in Idaho and on and on. Ultimately, the goal needs to be that nobody has these explosions. That is the point of the book.

Dr. Sekhar: Absolutely.

Stephanie: Okay here is "Next Steps" *(Stephanie hands Dr. Sekhar the chapter "Next Steps").* You have seen all of this. I went through, this is what you don't do but others do. That is part of this becoming a common communication thing so people are on board and know what to do in other hospitals and know what to do. We really have to get people to understand right now that it is not agreed upon there are all kinds of different… so we know what we know from Harborview. That is how this is going to go. That is what they do, so this is how they have the packet, this is how it would tie into what you have here. The great part about that is it says: You deserve as a patient, as a citizen that we do a better job of knowing about it. That is that whole thing that we are not going to sleep through it… So the only one I want to say is that new guy, I can't remember his name right now. *(Stephanie is referring to Dr. Vini G. Khurana MBBS, BSc (Med), PhD, FRACS-a Mayo-Clinic trained neurosurgeon from the Barrow Neurological Institute in Phoenix, Arizona)* He is predicting 27 million people have aneurysms that are unruptured.

Dr. Sekhar: Well, nobody knows frankly what is the exact percentage. All of our estimates are based upon autopsy studies, neurological studies, and so on and so forth. Some people have estimated it as high as 8% of the population. Eight-half percent would put it at 27 million, but I think that is an over estimate. I believe so. I think the estimate is closer to, but frankly, unless some population studies are carried out nobody is going to know. I believe the estimate is closer to 3 or 4 million people. That is a lot of people of course. If you have 100 people… Of course the incidents goes up with age. And if you are looking at the age bracket of 40-70 then that estimate is going to be much higher. This estimate is of 3 million includes a lot of children and so forth which is a much lower incidents of aneurysms. So if you have 50 friends there is very good chance that one of them would have one. And if anybody has a family history then it goes up more.

Stephanie: Right, right. See one of the things that and I talked to one of my friends when I was working as a principal and consulting and stuff and really dawned on me how good we are talking to kids about health. I can go on and on about things I have done that are pretty spectacular. And parents can bring their kids into the hospital and all this stuff except brains. We didn't talk about that. Then what I am hearing now that there are children affected are those children's fathers are being affected we need to take this on like we do breast cancer or anything else. Let's talk that. That is part of the goal.

Dr. Sekhar: One of the things I would say for me… Remember I had you go back to the intensive care unit and meet the nurses there? I think a lot of health care professionals do not realize how well the survivors do overtime. If you take your own case there were many people that nurses either they ask me explicitly or in case they were talking to their selves. Why are we bothering with this patient? She is in bad shape and she has not improved for so many days. I said you know that her brain doesn't look that bad. She is a young person. Let's us persist with the full three weeks of treatment. And see what she does. Guess what? At the end of two and

half weeks, you started to turn dramatically for the better. We have had a few other patients like this. Nurses, what happens to the nurses in intensive care units, they are very good people and they are very good about taking care of ICU patients, but they get a burn out syndrome. They feel sometimes the doctors are keeping patients artificially alive. Which is true in some cases and not true in other cases. They have no frame of reference. The frame of reference I have is I see the patient when they come in. I see the patient in ICU. I see them in the outpatient clinic. Then I see you like this just now. Just this one patient has given me enough confidence and happiness to keep the next 100 patients who are in bad shape. Right? But, they don't know that because they are not seeing the patient longitudely. So that is an important thing to convey. That this recovery process continues. I think you have it here, because I remember when you came initially and so on and so forth. The recovery... the stages of recovery. I remember them. Your friends remember them. You probably remember some of it, but not all of it. Right?

Stephanie: Right.

Dr. Sekhar: Because your memory was not good and so on and so forth. But, look at yourself now. Look where you were two years ago.

Stephanie: I would have been dead. Two years …almost.

Dr. Sekhar: So, this is the point. But this is a point to emphasize. This also has some bearing on how we view health care in our society as a whole. Because these are preventable diseases. Obviously, we as a society have limited resources and at some point, we are going to say yes to something and no to other things. We can only you know. But age is not a limitation. The disease is not a limitation. The only limitation here is the condition of the patient. If 35 out of 100 can be recovered is it worthwhile to be aggressive with that patient?

Stephanie: What is the alternative?

Dr. Sekhar: I know. Here is the important question. The alternative is to not treat those 100 patients. See what I am saying? We as a society, somebody may say you know you shouldn't be treating these 100 patients who are in bad shape. First of all they don't realize … *(phone rings for Dr. Sekhar).* No, the alternative is that there are people who say patients should not be treated. There are intensive care doctors, nurses, hospital base, and they may be a number and what is that number? Let's say it is not 35 but it is only two. For argument sake it is 1 out of per 100. Is it ethical for us to treat those 100 patients intensively for X number of days and spending so much money when only one of those patients is going to have usually recovery? This is a very important question and argument that happens in society and if it is not happening already, it will be more and more because as we start looking at health care so on and so forth. Let's look at that number. Somebody says for the sake of one person we can be spending that money for taking care of children with preventable diseases. We should be doing that instead of taking care of those 100 patients. If that is the answer then the question becomes, what is the magic number? Is it 10? Is it 20? Is it 30, 35, 40? At what range do we say here is where we are going to stop being aggressive with this population of patients? This is a very important question. I think you should think about…

Stephanie: Yea, we have had this sort of argument and this kind of argument, I would have been unplugged.

Dr. Sekhar: Yeap that is what I am saying.

Stephanie: Answer to that question is unless you have been appointed to God somehow and that you can prove it. You don't know.

Mary: Why should it be a number is my question?

Stephanie: Because it makes it easier

Dr. Sekhar: No, no the number is the chances a particular person is going to recover from a serious illness. That is what I am saying with the number. The chance that we have really solid data, in fact our data are better than what has been published before. That 35 patients out of 100 have made a good recovery. You know there are patient groups, which we know from our data now that don't have such a good recovery. Those cases we wait three or four days and look at recovery and we go and talk to families. We tell them that it is unlikely your beloved or whoever it is is not going to make it. Do you want us to continue or? They always have a choice. Families sometimes say no. That is why I am saying it is a number. Number meaning what are the chances and what stage do you say yes and what stage do you say no? What does the family member and what does a person want to know? Somebody came and told me let's say that my wife has some serious disease. Okay and she is in some sort of misery or whatever. Someone came to me and said look we can give her treatment X whatever it is. There is one chance in a thousand she is going to recovery and 999 chances in a thousand she is not going to. Then, let's say I say okay. Well, for my wife I want everything done. Then, they tell me that is okay, but the treatment is going to cost 10 million dollars and your insurance will not pay for it. Will you do it? Then I am going to start thinking is it something I can afford or something like that. Everything we do is framed in a sense of… I think it is important for you to give your perspective on that…

Stephanie: Right.

Dr. Sekhar: I think you need to ask this question.

Stephanie: Yea, I think in one of the chapters.

Dr. Sekhar: You need to ask this question and give your answer. This is what I am saying.

Stephanie: Good, good.

Mary: State the question one more time.

Dr. Sekhar: The question is when a person with a reversible disease is in a bad condition and has a certain percentage chance of recovery is it worthwhile or not worthwhile to persist with

aggressive treatment? You could put in blank percentage. You could say 1%, 10%, 30%, or in her case 35%. But in fact, at that time we probably didn't know quite frankly. I thought it was one in five. Our numbers look better than one in five. This is a question that every family and every person should be asking themselves. Because they are going to be confronted with this at some point in their life. Some doctor is going to ask about their father, their mother, whoever.

Stephanie: That is part of the book, too.

Dr. Sekhar: I think that is where people can make a difference. By that, I mean patients, organizations, book like yours. Being presented to Christine Gregoire, being sent to President Obama. They can set aside dollars for more research. Not research into the condition, but what I find lacking personally is support services for the families. You are very fortunate to have a circle of educated, reasonable people that support you. I have patients that don't have that. You know. And our safety net. I can see. I have one patient that I can tell you that I said I would like to see you next year. "Doc I will lose my insurance and I don't know if I am going to come back here." Look, you come and see me next year, I will see you without any tests, and I will not charge you anything. I would like you to come. But, I know that this guy if somebody would work with him he could be in a better place. But, first of all, we need to obviously do a study to prove this point. Not that we have done a scientific study, but we could do it, but we need funds for that. We could do a study to prove that a structured rehabilitation for aneurysm recovery patients. They can have a better outcome as compared to somebody who patients that discovery and go. But this is the kind of support service I don't think we have in our society.

Stephanie: Is that is what we dealt with in education on different issues, but exactly the same thing with kids. So for example, in the United States, 30% of the kids in high school do not graduate. Those are not make up numbers those are real. And so it is part of all of us looking right now and it is something I fought about as a teacher.

Dr. Sekhar: Why is that as a teacher? What is the reason for that? Is it all family related?

Stephanie: No, it is not. It has to do with the family, the people who run it, where the money comes from. All of those and the issue is that the 70% succeeded so it is not our fault. We still have enough money. We did it the right way. It sounds really familiar. Some of my friends today from Aki said why don't you come back here. Oh, no. I want to work on this one; I want to work on this one. Because I learn so much from this. And it is so like what …

Dr. Sekhar: I am very much interested in this topic as well. I always wonder what you know we create a program for families kind of adopt a child. Not a full time adoption. But they only adopt a school; I mean they adopt certain aspects of it. My father, he was a physician in India, in a small town. We used to have poor children, poor children, and they'd come once or twice a week and have a meal in the house, buy them all their clothes, all their books, everything. And they would get books and this that and everything. They were very good students and of course the government in India has started this mid-day meal school program. But it clearly seems that these kids who are dropout need more than just money or …

Stephanie: Let me just talk about that. Mary and Paula go to Crescent Harbor School and most of their kids are 60% are poor. They are lower when they come in with skills. 400 of them attend. With her work and with Paula's work those families do that and they all showed up; they were there with their kids, and they were helping their kids, and they all get answers and deals with people to help all the kids. *(Stephanie was referring to Math Night)*

Mary: Because you care and you have to spend time. That you have to know them and that is something you really taught me to know them as individuals. And that is what I am hearing from you; that this is about an individual.

Stephanie: So that is part of this too. This is to say; when we talk about brains, we are not going to talk about it because it is bad. It is bad for us if we don't talk about it. There are all kinds. Anyway, I did these questions for you. Look at number 1 and I don't know if you will like the rest of them.

Dr. Sekhar: What do you want money spent on earned in a charity?

Stephanie: Here is what I want to do. I used to have to find money for people in schools. I was always getting money from places. I did not rob it okay. Don't think I went to them and said, "Hold up." But, I was able to get money by having a cause. That is why I want to finish the book, because I want to be able to talk to people in Seattle or in the other districts I'm known in. I also want to talk to the vice president and say, how can you dare… I know people all over the country or people that I can connect to and say we need you to do this cuz all of us have worked on that kind of stuff.

Dr. Sekhar: So to answer your first question *(What do you want money spent on earned in a charity?)* For me the number one priority with respect to aneurysm patients is really to do some research on the patient after they leave the hospital. There has been very little research on the recovery of the patients and what can we do to improve the recovery so to provide services for them to optimize their recovery. And how are patients different and how do their brains recover differently?

Stephanie: They do. They do. I didn't know that, but they do.

Dr. Sekhar: So, This for me would be number one priority. The second is to spend up some education of people in general, probably starting with high school level. To really talk about their brains. What are some of the problems they can get into? Not just aneurysm, brain injury, how the brain is connected to everything else. I think that would be a very big help. The third would to be to look at newer things we could do, we are doing the research to make some of the operations less invasive or really research to put stem cells in patients who are in very poor condition to see if they can recover. This type of research. And a third area would be the genetics' research. We also want to start something like this, but it requires a tremendous amount of funding. The genetics' research to look at that. But, I think the genetic has taken a back seat from it because the question always comes up if you do know that you are prone to have this disease what are you going to do about it? Other than early detection perhaps. So, I think that so, these will be my priorities.

Stephanie: That sounds good, that sounds good.

Dr. Sekhar: Yea, between 20 and 30 percent of the patients have a warning leak. That is in this talk, you will see. *(Dr. Sekhar refers to the presentation March 10, 2009 Mini-Medical School Graduation Night) (Dr. Sekhar reads silently the question: Should I include pictures of my brain into the book?)* Yes, I think you should include pictures. If you want to, we can give you your aneurysm, your MRI, and things like that.

Stephanie: I do have those they gave me copies of them. I think.

Dr. Sekhar: I think you could put your brain, your aneurysm, and I can put you in touch with an artist who can actually superimpose the two of them. In other words, sharing a brain, in a brain, there is one slide in this that shows locations. You can make that person go draw it in. This is where Stephanie's aneurysm was located or something like that.

Stephanie: Let me ask you, When you did this to my… did you fundamentally… if I was going to talk to ordinary people about that. Did you just sew the vessel back together?

Dr. Sekhar: No, I basically placed a clip across the base of the aneurysm so blood would not longer get into it. I punched it in so to remove all the blood inside of the aneurysm.

Stephanie: So you put a... What would you call it?

Dr. Sekhar: It is a clip at the base of the aneurysm. It is called the neck of the aneurysm. So that is actually pretty well explained in this talk. *(Dr. Sekhar refers to the presentation March 10, 2009 Mini-Medical School Graduation Night)* I also, we take great care not damage any brain that is not already damaged. In your case, you had a big blood clot. If you recall as I told you. That is one of the reasons we had to operate and yours was a complicated, complex aneurysm. Those were two reasons you needed to have surgery other than the coiling. We intervene in that way. We tried to go between the areas of brain, between parts of the brain or base of the brain. So we don't damage it.

Stephanie: Okay, okay. You did damage some of it though right?

Dr. Sekhar: I think it was damaged because … not because of the surgery, because of the bleeding.

Stephanie: I know.

Dr. Sekhar: We minimize any further damage.

Stephanie: I know that.

Dr. Sekhar: Exactly, exactly.

Stephanie: I get to kid every once in awhile.

Dr. Sekhar: That's okay. *(Dr. Sekhar reads question number 4)* In the book, I am including all the things I did to get better on a daily basis. Is there anything you believe absolutely should be included? I have something I believe in, this may not resonate with everybody, and that's prayer. I believe in one God. I believe there is a God. I don't think everybody has to believe in God in order to be a good person and lead a good life. Me personally it is very helpful. I think that prayer can help a person to get better. It probably activates certain things in your brain.

Stephanie: You have to think and that reminds you in church.

Dr. Sekhar: Not just that. It activates, they found data that parts of the brain that helps the healing process. So it is. It doesn't have to be any particular religion or particular faith, but I think that can be helpful. Obviously, not smoking. Manning other risk factors like high blood pressure, diabetes if you have it, high cholesterol particularly, and exercise. I think these are all important. There is not doubt in my mind that the support of family and friends is crucial. That makes a huge difference. It is nice for people to see their loved ones and there is a reason for them to come back.

Stephanie: Which I would say to you is that I didn't... I don't remember any of that for almost two months. I think by the end of March I was starting ...

Dr. Sekhar: One thing I remember about you all the time you were always surrounded by friends. In addition to your dear friend, there were always seven to eight people in the room and they were laughing, they were joking, and we would laugh and joke. But always people there.

Stephanie: Right, right. That's continued when we went home and I went on field trip to the ocean with those guys and those kids walking around in the water and had to help. It was everyday, everyday. I remember at one point I think it was…all of this would be in the book. In April I thought I better do what all of them tell me what to do or I would have to go back and be in the hospital. No, no, no I am going to stay. We are hoping the book to have that kind of... Yea, that's funny, like that. So it is personable. So it feels… We are making progress.

Dr. Sekhar: Can aneurysms be prevented? Are there telling symptoms, genetic telltale signs, etc? *(Dr. Sekhar is reading question number 5)* Well, I think at the moment we do not know if aneurysms can be prevented. The formation of aneurysm, but aneurismal rupture certainly there are telling symptoms, which I have here. It helps us a lot if we have early, if you catch the people early. In terms of genetics, anyone with a family history, family history is what we consider two first order, second and third order relatives. It could be you and your brother, it could be you and your cousin, or something two family members affected. They should get a screening. Some other diseases such as, polycystic kidney disease and Marfan's are listed here as well *(Dr. Sekhar is referring to PowerPoint presentation slide number 8-Brain Aneurysms)*. Those folks should be screened. Now in days we found the best, easiest screening method is CT Angiography unless, sometimes MRA, CT can be done MRA cannot be done. They don't catch everybody but suddenly easily… In terms of genetics we don't at the moment, we really don't know what genes are involved so we don't know how to prevent it.

Stephanie: But, but it is possible to... I have read, read, a lot, a lot, lot and I understand it is everybody and different people and... It is true. One of them is that there are people who have this that don't fit any of those descriptions...

Dr. Sekhar: A lot, the majority of them don't. The majority of them are sporadic.

Stephanie: In UCLA, the people that there are put on the list of people I'm sure there are lots of people that have it don't. That's why the other.

Dr. Sekhar: The majority of patients don't. In fact only 15% at the most 15% fit into this category 85% … In Japan what they are doing is something called "Brain Doc". That's never going to be done in the US. Basically what they do is almost every patient over the age of 60, they can go to the hospital and they can get a complete scan of the head and the heart. Using this test, they discover a lot of problems. Then of course, the issue is should they be treated or should they be treated at all because some of them may be symptomatic. Never the less using that they find a lot of patients with unruptured aneurysms.

Stephanie: When is everybody going to go WOW that is really interesting? I didn't know that. We know. When is that? I am willing to work on until I say good-bye on this earth. Because I think we need to know. You do a fabulous… you are just amazing. Do you feel like that?

Dr. Sekhar: No, Let me put it this way. I feel blessed that I have a job that I take care of patients day in and day out. 95% of the patients have good outcomes. Which is even better. 5% of the patients don't. Some of those who don't are angry or mad or some of them are just sad. I feel blessed that I am in an occupation where I am doing this and frankly, I must tell you that this was not my first choice. I didn't want to be a doctor first all. My father forced me to become a doctor. I wasn't sure what I was going to do really. Then I, finally after a lot of thinking I narrowed it down to neurosurgery. Then I choose to specialize in certain areas. I always feel very blessed. To people say well don't you feel good and I say, No. I am thankful to my patients because every time I take care of a patient I get some happiness and satisfaction. Can anybody pay you enough for this? No, I could be in an occupation where definitely it is a good job, a very important job. I could be a solider for instance. I have to kill people right? I am taking the extreme opposite. Never the less it is defending our country and it is a necessary occupation. But, I am not in that occupation. Or I could be a banker and taking all the money and people's assets and going up and down. Many useful occupations in society. I think being physicians and being teachers probably come to nearly the top in terms of occupations. When you are a teacher, people may not give you enough thanks, but every time you see that student… Being a teacher has been compared to being a ladder, somebody said a ladder. Does anyone thank a ladder? No. How many people climbed up that ladder to go to somewhere very important? Right? So, these are probably the top two occupations in any society.

Stephanie: I always felt that way about it.

Dr. Sekhar: But, I feel blessed to be able to do what I am doing.

Stephanie: But, what I really want to know, and we won't quote you on it if you don't want to say it. But you're really are not like everybody else. I would think you would know that. Are there thoughts or things you would like to do that would help colleagues of yours considered as equals of yours that don't handle like you do?

Dr. Sekhar: I think at the end of the day it really comes down to…I tell you what the difference could be... I am a very philosophical person. I have done a lot of studying of religion, philosophy, and stuff like that. I have a lot of ideas. I think at the end of the day you have to ask what your role is in time and space. Okay, so you think about it. I am a student of history and I love reading about history. But, not just history in the sense of what happens there. Actually putting yourself... Did you ever seen the movie "Timeline" Michael Crichton, he writes the novels, he died you know? People get transported. A bunch of students and the professor actually are transported back 500 years or 700 years back in time. To a point to where they land in France during the 100-year war. Something they live it at the time. It really comes down to the question is this our only life or are we going to be born again and again? That is the question everybody is going to have.

Stephanie: People talked… Paula has talked about that whole…

Dr. Sekhar: Okay, I have my own thoughts. I have come to the conclusion that even though my background is eastern religion Hindu. I have a lot of… Hindu, Buddhist, and eastern religion all believe in reincarnation. But, my own take on this is it may or may not exist. Nobody can prove it or disprove it. So you have to live your life, as this is the only life. Right? But, if 100 years from now is anybody going to remember me as an individual? Very likely not. We think about a few individuals but there were hundreds and thousands of people who made contributions to their society. So at the end of the day you have to do things in your life, which you feel are making you happy, helping other people, and helping your family. This is the only three things. Right? If you do that there is no reason to feel elevated or not elevated if you are doing those three things in life. This is the way I look at it. You know. That is what I would say to other colleagues. There are colleagues that one may consider arrogant or whatever. But, if you now look at yourself in space and time we are probably…

Stephanie: That helps you get through that kind of stuff.

Dr. Sekhar: Less than that, I never have to think about it. It is always a part of me.

Stephanie: I like that. I like that.

Dr. Sekhar: Because there are times, I feel I could do better. Many, many times I could do better.

Stephanie What do you think of the head of neurological surgery at that place up the hill who used to be here?

Dr. Sekhar: Who? Swedish do you mean Mark Mabel?

Stephanie He was here.

Dr. Sekhar: Do you mean Doctor Newell?

Stephanie I think that is right.

Dr. Sekhar: Newell, Oh, frankly I didn't know him that well. He was here before me and I knew him as a more or less as an acquaintance and he left, you know. He had his reasons for leaving and reasons for staying and people have their reasons for doing what they are doing. I don't care about it. I don't worry about it. I just feel like we have to do our job. We have to do it better than we are doing it now.

Stephanie Yes.

Dr. Sekhar: David Newell that's his name.

Stephanie Yea, I got an invitation to go down there because of my, my internist, before all of this happened. I think they suggested I get involved with that. I am really tempted when I am done with what I want to do. I want to get done in a reasonable time now towards the end of this year probably. Because I want to ask those questions about what are you guys going to do, why is that working, and can you tell that to people? I would like to spread that through the education system. Because I don't think it works. I want them to change too.

Dr. Sekhar: Well, can you really change people? You can change when they are in high school. You can change somebody when they have a life-changing event such as, a major heart attack or loss of somebody dear to you or something that changes people dramatically, a divorce, a major event that changes people. You know somebody who almost dies, then they realize their life should be different or something.

Stephanie You just described my new job.

Dr. Sekhar: So many stories of that. But other than that can you really change an adult person? I mean I don't know.

Stephanie I think except those adults, their families, and their children and so… if I don't know. It is down the road.

Dr. Sekhar: I am saying, I mean you should use your energies better.

Stephanie Yes that is what Paula says too.

Dr. Sekhar: Let's see now coming down the line. *(Dr. Sekhar reads question number 6)* Does rehabilitation in communities for aneurysm patients need to be established? If establish should they stay connected with the hospital? I really think this a crucial question. I said earlier that this has not been answered properly to mine own thinking. We would like to do a study to take

our patients let's say who are coming out of the hospital and then randomize them. One group of patients get structured rehabilitation and the other group gets standard, whatever we have right now, and see if there is a difference. I personally believe that a structured rehab program will be beneficial.

Stephanie You are not talking about what is being done now as being structured?

Dr. Sekhar: No, no

Stephanie: Good

Dr. Sekhar: And I think further education can help these patients to manage their health better.

Stephanie: So they know what to ask.

Dr. Sekhar: Because I think this is a major flashpoint in their life. This can then be used as a changing point in their life to take control of their health a little bit better. So many people go along they are smoking, they are drinking alcohol, their obese, and they are not exercising. They have a heart attack and something changes. They suddenly realize all of these things are not important for them anymore. They change. Right? Sometimes personality changes. I have a friend of mine I tell you, she is... She is now 65, and she lives in Washington D.C. She was a health care lobbyist in Washington D.C. and she owned a couple of restaurants. This is all hear say, I didn't know it at the time, but she got hepatitis C. She got liver failure and she went to a hospital in Huston, they gave her a liver transplant, and it failed. Immediately rejections. Then she was on the list for a whole month and they found another liver. Now she is more than fifteen years a survivor. What she told me is she almost died. She went up there and she could see a bright light. She felt like somebody was telling her you have to go back to earth. You have to change your life and you have to help other people. Can you imagine I have a friend of mine who is a surgeon, a very prominent surgeon, not a neurosurgeon, cancer surgeon in New York? Exactly the same thing happened to him. He was in a plane from New York, pulling out of John F. Kennedy, going to Canada to ski. He had a big heart attack. They turned the plane around and his daughter and his friend were sitting next to him. They brought him back and he said he was up there and he could see himself. He could see his entire life. He felt like he was meeting a bright light and he was given the message. You have to back and change yourself. He changed his personality become calmer. You know he used to be a real type A personality. There are things that happen life-changing events. I just think that a ruptured aneurysm or even an operation or treatment for an aneurysm is an important health event in a person's life. The individual can use that to change their, turn their health around. Not only for themselves but also for their families.

Stephanie: It makes sense, except but the difference is that we cannot connect with the light because our brains are being drowned. They're shut down. They don't have those experiences.

Dr. Sekhar: Even if they don't have those experiences, I'm just saying that the fact that it happened during the rehab process they can be more connected to. That event changes them.

The rehab process they take it much more seriously. So many of my patients they come in and I say look, "You need to quit smoking. The last cigarette. I think you are done. No more cigarettes." Believe me 70% of patients quit and 30% don't. Seventy percent is pretty good considering that they probably tried before or whatever. *(Dr. Sekhar reads question number 7)* I understand that Harborview is connected with UW but shouldn't all hospitals be connected on this important issue? This is an important thing. I think hospitals should be connected. This is something that should be done at a federal level. I personally would like to see the federal government get involved establish centers of excellences. It doesn't need to be just one; it can be more than one. Diseases should be treated in centers of excellences so that patients do get better care and better outcomes. You know, guess what, centers of excellences can treat patients at lower costs because they are fully using their resources. We have four endovascular suites. We have two rooms where we can do aneurysm cases. We have so many operating rooms. We have teams. We can do 24/7. There are hospitals where these things are not available. You know. Let's say hospital X puts in a full-scale endovascular suite for 5 million dollars and they treat ten patients there within the year. What good is it? Outcomes are not as good.

Stephanie: Absolutely, absolutely. That part is part of what is wrong. Name the topic and it is wrong.

Dr. Sekhar: Right now there is no incentive. The way our health care system is structured is the incentive is reverse. Hospitals want to succeed. Therefore, they want to hang onto patients. We started the conversation that way. Same with doctors. I think, I personally think that a Kaiser Type system is better. Neurosurgeon let's say. The society decides that so and so is a neurosurgeon and he become a neurosurgeon through so much education and effort. Okay if you are a starting neurosurgeon you will be given a salary of, let's say pick a number.

Stephanie: $100, 000.

Dr. Sekhar: $300,000 or whatever it is a number. You fulfill certain criteria, which may be one person is doing more work than the average person or one person does more research or whatever you can earn an additional $50, 000. Then, when you get to a certain level, which may be based upon your education, your expertise, or whatever. You can make x amount more money. Okay. So, this neurosurgeon *(Dr. Sekhar's phone rings)* So, what I was saying was is the neurosurgeon was not thinking about doing 300 more cases in order to make his money, but he is given a job. Of course, there are some incentives. You have to have some incentives built into any situation. If you don't have incentives then people won't work and it will be a communist system. Our current system is structured in a way that is the reverse of it. The more patients you operate on, so therefore the people maybe tempted to do more than they can handle. Or people are attempting things they shouldn't be doing. What I am saying, we probably should be thinking about a system where we do have descent incentives. I've seen. I was in private practice for a couple of years. I've seen a lot of abuse of the system, the doctors. I know that the other thing is defensive medicine; the fear of lawsuits certainly increases at least by 30% or so the amount of tests that are order so on and so forth. That is another thing. These are all issues that we can and should and I think that is part for instance part of this health care, whatever the initiate President Obama has. They're going to have a series of town hall meetings. I think the

more educated the public is about it, the better they can really respond and communicate their needs.

Stephanie: I guess the question I have along that is I have zillion of questions… Why did I get you?

Dr. Sekhar: Basically, what happens is this. When you come to Harborview hospital, we have set up a call system for ambulatory endovascular service. Harborview hospital has endovascular team. There are two neurosurgeons and two neuroradiologists on the team. I am the leader of this team. I set up a system where one of the four of us is on call. You would have been always under the care of one or the other neurosurgeons. There are two neurosurgeons. The reason is you probably landed when I was on call, number one. Secondly, we elected to perform surgery even if you hadn't had endovascular I still would have been involved in your care. You had almost a 50-50 chance of being with me rather than my colleague at that time. Our team, we work well as a team. We look at results. We criticize each other and so no on would do anything egregious. Sometimes we have bad results, but it is very rare that any member of our team would do something totally out of line.

Stephanie: Okay, It rumbles around that you are fabulous. Your scope. I was really lucky. Other people not neurosurgeons, talking like that. People said you are really lucky that I got you.

Dr. Sekhar: Well, I think the good news is Dr. Richard Ellenbogen, our chief of neurosurgery, has set up a system where specialize system where only two neurosurgeons handling all the brain aneurysm. Two neuroradiologists. We have set up a really combined good system where we really work together.

Stephanie: Did you set that up?

Dr. Sekhar: Yea, yea I set it up. It is a remarkably good thing, because there are places in the US but also all over the world, where I go to other parts of the world to lecture. People don't get along and they fight with each other. They see cases, do this, and do that. When it happens nothing works. In this way, there is a little give and take. Sometimes maybe I feel I should be doing more operations and somebody feels they should be doing more operations. At the end of the day, we look at everybody's cases and know what is going on. Know what everybody is doing. We write our papers together and we take credit together for what we do. So this, we feel happy that way and we feel we part of the team. We have of course anesthesia doctors who are really good. Sometimes we have to fight for that. Sometimes we have situations where you know, where the anesthetist might not be good. Or the nursing might not be good. We fight, we fight. The hospital takes it seriously because they do recognize that this is really an important thing for them.

Stephanie: And that is what in terms as I got, better, better and better. I have success attached to me with doing exactly that with staff. It worked like that. The schools that don't do well don't do that. You got an outstanding example and performance we should do in medicine. You might be all by yourself doing that. It is time for us to look at you. I wouldn't count on not being remembered by lots of people.

Dr. Sekhar: Well, you have to think again. The further you get out... Right? You pass one generation and the next generation you know.

Stephanie: You have shaped how things...

Dr. Sekhar: But, is it important after you die. See what I am saying? Well, you don't even exist. So how important is it? This is perceptive you always have to have about yourself. My feeling is you should influence things when you are alive.

Stephanie: Well, I am with you on that.

Dr. Sekhar: You know. When you are alive you should have people. You should influence people. Should help your family. Should help your friends. Everybody in this in respect is your friend. In a sense, every single human being who has an aneurysm right now is your friend. See what I am saying? You have set out to influence those friends, that group of friends, and their friends. Each one has a family, circle of friends, etc. You know after you pass you don't know anything and I am sure your first generation. I remember my father, but my children don't remember my father. I remember very little about my grandfather, very few things. I remember almost nothing about my, I don't know my great-grandfather. See what I am saying?

Stephanie: But what you are saying is the major point is about how you feel. Isn't it?

Dr. Sekhar: Yea, yes that is what I am saying.

Stephanie: I am with you on that point. Absolutely, that is a major point and that is why you stand out. If you are going to experience, make decisions, work with people, create collaborative, focused people to prevent and come out with these results. Yes, this is good and you should have a nice dinner tonight.

Dr. Sekhar: Absolutely.

Dr. Sekhar: (*Talking about a female patient)* and not an aneurysm but a stroke to one of the hospitals in the city and I won't name the hospital. Lay in the hospital waiting for a MRI scan, which she got and she was eventually transferred at the request of the family member 24 hours later. Had she arrived, had she been transferred within three of four hours we may have been able to remove the clot and reverse the stroke. Now we did decompressions of the brain and so on, but basically we did things to preserve her life and she probably will recover. Her recovery would have been a lot better had she been properly treated and transferred to the right place at the right time. This didn't happen, but it almost means that the educated consumer is the better and needs to know. So how do you know?

Stephanie: Well, what I like about working on this book is that there are three or four things we would like you to think about your brain, your heart, and then you need to know what kind of care you should get for these things. If somebody wanted to pick up hearts and do all the hearts like at Swedish. It is okay with me. Give us all the brain people here. So that everybody

is informed and knows what they… It is not like buying and car and it really isn't. What I thought about is all the things we have done over time in education and how I did things when we would have a group of kids who they would say are going to fail. I had all kids who were called dropouts. I was able to move those kids 95% of them to go ahead and graduate from high school. Then I got on a kick about… I had 50 % of them going on and graduating from college. Why does that happen? Because of what you did with me. What my friends and what my family did, which is to treat me like an individual. Know that you sure can't function if you can't... Like I was telling… when I wrote one of those things in the story on you. We brought those vegetables from our garden. I pointed at them and I couldn't remember what they were called, but you asked me some questions. Well, Paula saying the other night to say, "Hi to him." Because what I did then for months after that conversation I'd say okay I figure that is not okay. Does it matter? A lot of them are green and if I say they're green, it is not the right thing. She said well you got some more work to do. It is great. It is the reason contributed to why I am back to being myself. Except for one issue that came from that and that is how I get nouns. I want what I want them. I used to be the queen when it came to that and now I can sometimes trick the listener into filling in the blank. I can use a different thing. I can think about what I want to talk to certain people and kind of write them down so I have them. People who have been so helpful to me and really love me I say hey, "You know it is a noun and it fits with the rest of this. What is it?" Lots of times, when people are older they... we all think I didn't watch that show. What was that? Yeah it has been good; it's been good. I had a heart thing to and you were there it was the first time you had been at that school (*referring to Aki Middle School)*. It was amazing. They came running to me and yeah. It was good and I want you to know…

Dr. Sekhar: Thank you so much and if you like to meet me again I would be happy to.