

ANPT Inspirational Conversation
Susan L. Whitney, DPT, PhD, NCS, ATC, FAPTA

Transcription of Full Audio Interview

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Interviewer (I): I'm here on February 20, 2018 with Dr. Sue Whitney. Let's just go over your bio first. You went to Temple University for your PT Education and then you got your Ph.D. in motor development and motor learning from the University of Pittsburgh and your DPT was from the MGH Institute of Health Science. You've worked in various settings as a therapist and currently you're a professor at the University of Pittsburgh School of Health Science and Rehab. You're the program director for the Centers of Rehab Services, Balance and Vestibular Rehab Center, and you are a faculty researcher at the Medical Virtual Reality Center in Pittsburgh. You're a fellow of the APTA, you're a member of the APTA board of directors, and you've authored and co-authored over 90 articles on Medline, 10 articles published in the last year, and incredibly involved internationally. Did I miss anything? Nope, got it all in there.

Sue Whitney (SW): *laughs*

(I): So, after all of that, what made you decide to become a PT? If you go way back, what was that initial desire?

(SW): I was a volunteer at, well I wasn't a volunteer, I went with my friend, who was a military dependent at Valley Forge Army Base. She used to have to go buy stuff at the PX for her family, so we would go in this little VW car and at this time, seatbelts weren't mandatory, so I was hanging out of the car, waving to people because we were just stupid teenagers and we would go and play basketball. When we played basketball, we met all these people, who had an amputation, this was at the end or kind of at the end of the Vietnam War. I thought it was pretty cool. So, we toured the facility, you could do anything on an army base then. I met some of these guys and I thought, wow this is pretty cool, I kind of like this, maybe I should learn about PT.

(I): And that was it.

(SW): That was it.

(I): So, you knew right out of high school that that's was your track and you were on track for it and everything else.

(SW): Yes.

(I): What a great way to uh...

(SW): Yeah, I was probably 16.

(I): It must have made a huge impression on you, obviously. A lot of people have benefitted from that. So what position...what was your first physical therapy position like? What setting? What was it like when you first got out of school?

(SW): Yea, Moss Rehab, it was great.

(I): Okay.

(SW): So, I had done an affiliation there and I had decided that I was going to be the best at spinal cord injury, so by the time I left, I was the supervisor of the spinal cord injury unit.

(I): That's the best. You set the bar at the best and so, you accomplished it and you moved on. So, what made your decision from moving from a clinician to a clinical researcher? How did you make that transition?

(SW): The big decision was not to be a clinical researcher, that's not why I got a Master's Degree. I got a Master's Degree because I didn't want people to tell me what to do. Because I worked with physiatrists and I thought that I was as smart or smarter than the physiatrists and they didn't listen to me. So, I decided to get a Master's Degree so people would listen to me.

(I): And 90 articles later, they are listening!

(SW): I had no plan on writing anything, at the time.

(I): Really?

(SW): Yeah, I just wanted to put myself in a position, where people would respect my knowledge and skills.

(I): Okay.

(SW): And my plan was to be, I think it's Kathy Curtis is her name, she was my role model. So, I was involved in wheelchair sports with people with spinal cord injury, VA games, and also another group that did international wheelchair sports. So, my goal was to finish my degree and be the best PT in that area! Being like this wheelchair sports PT kind of person! So, that was why I went to school.

(I): Okay. Was there something that those early mentors said to you, that you carried with you, as you moved through your career? That you recall making an impact or something that really stood out to you?

(SW): Not specifically, but I knew as a PT student, I know this sounds ridiculous, but I sat there and knew about APTA awards, and things like that, and I knew I wanted to do that.

(I): Okay, so it was all about setting those goals and looking towards the future. It was just the knowledge of knowing that they were available.

(SW): I set a goal and I'm relentless. I am, it's a curse and a positive. Both! Yeah, I was always somebody who said, I want to be one of the best at whatever it is.

(I): So, when you got that degree, do you feel like they listened to you?

(SW): A Master's, no. No, in fact, when I finished that, I didn't know what to do. So, I interviewed in Texas, at TIRR. Because TIRR is such a great place! I interviewed at Texas Woman's and I interviewed at Pitt. I got jobs in a bunch of different places, but, I probably would have ended up in Texas, a Texan, but everybody scared be, when I came down here, about the bad weather. They said that it's always hot and humid and oh, you have to have an air conditioner everywhere, and this and that. I thought, you know what, I don't want to live in a little box. So, then I wasn't sure what to do, but I decided I'd start at Pitt and if I didn't like it, I'd quit in a year. Then, after a year, I tried to quit and the dean pulled me into the office and said, "you only gave it a year," and I said, "but the student's don't like me, I'm a bad teacher, I'm not very good at this, I'm going to quit", and she said, "just stick with it a little while longer," and so I did.

(I): So, is that when you transitioned to your Ph.D. program and doing that because you enjoyed...you stuck it out?

(SW): No, I only did the Ph.D. because I knew that if I didn't get a Ph.D., I wouldn't be able to continue to teach. I really had no plans to do research! I still wasn't in research! You know, I kind of slept in Kevin Cody's research class and I love Kevin Cody. Dr. Cody was one of my instructors, but, I don't know if you've ever done this...one of these...the cover the eyes and look down. If I was one of those people who pass out, I would have passed out in that research class. I thought it was really boring. And so, research class is kind of boring, depending on how it is taught. Poor Kevin was boring! So, I hadn't planned on doing that at all. No, it was only because I thought, well, if I want to teach, they want me to have a Ph.D. So, I decided I better go back to school and then they started telling me that if I wanted to keep my job, I better do some research. So, I decided, I've got a really good friend, who's an OT, and we did a couple stroke studies and then at the same time I did my Master's degree, I got my athletic training certification. So, I was involved in the Master's program in sports and I actually taught a lot of the orthopedic stuff in the entry-level PT program. Then I thought, I need to get into all this sports stuff, so I did a lot of stuff with sports and wrote some paper, started writing some things related to that and then it just kind of evolved.

(I): So, sort of this organic type of...it just evolved. It met whatever need you had in your life at the time. Now, how did you manage, how did your family feel about that transition? How did you manage that work life balance?

(SW): Well having two babies when...well I was lucky because at least I wasn't pregnant when I did the course work. I could buzz through course work, that's easy. It's the dissertation part. I was on the real long, long, long-term plan because with two kids, it just didn't happen. So, it took me probably 6 or 7 years, which is ridiculous, to get a Ph.D., but when you work full time and you've got two kids, it's a bit of a challenge, but thank God my husband was supportive or I couldn't have done anything.

(I): Yeah.

(SW): Both my kids were old enough...and Mr. Rogers was actually our graduation speaker, so they knew him. That was pretty cool. But yeah, it took me a long time.

(I): Do you think that your commitment to education translated into your children?

(SW): I don't know what you mean?

(I): Like your commitment, your own educational development, do you think that rubbed off on them, when they were small kids?

(SW): One, yes and one, no!

(I): I mean, I always kind of wonder that, you know, when you have therapists, who have lives and are also passionate about their careers. Does that rub off on those kids that are watching?

(SW): One's got a Ph.D. and published in Genetics yesterday and he's published in Nature. The other is a three-year college drop-out with a GPA of 3.5.

(I): So, it is what it is.

(SW): And he does heating and air conditioning and he likes it. God bless him and I think it's great.

(I): That's great. Definitely a commitment to work and being the best maybe.

(SW): Yeah, they both work hard. It doesn't matter what they are doing.

(I): Yeah, so maybe it's not about education, but maybe it's about a work ethic and your dedication to what you are trying to accomplish and that you can accomplish the goal. How did you get introduced to Vestibular Rehab? Because that's a primary area.

(SW): That was a fluke! So, Joe Furman was new guy in town, my MD Ph.D. buddy, and I call him my work husband because we have worked together for so long. I don't love him like my

husband, but I love him, since we're such good friends! Joe came to a faculty meeting and, it's actually pretty wild, so he came and he said, “*inaudible mumbling* when I send my patients to PT all the time, they just hand them a cane and they send them home, there has got to be more than that.” So, Karen Maloney, who is an OCS now, was teaching all of the ortho stuff. She and I just kind of said, we're interested. So, we put up our little hands and about 3 months later, Karen was a drop-out and I stayed in.

(I): Because you wanted to be the best! That's my guess!

(SW): Well, no. I didn't know anything about this. I was so clueless, it was beyond belief because there were probably under 10 papers in the world written at that point.

(I): So, what time period was that?

(SW): Well, I was pregnant with EJ, so it was 1985.

(I): 1985, okay.

(SW): Yeah, and there were probably 10 papers, if that. The Cooksey Cawthorne papers, the ones from Belgium and just a little bit of information was coming out of Ann and Fay. Because that was pre Ann and Fay and their key papers. So, I said, I'll try this. I use to roll people around. I never did that crazy, well I shouldn't call it crazy, well, um, you know the test with Neil Shephard came up with, the...what is it called? When you roll them and you say, how dizzy are you?

(I): The Motion Sensitivity Quotient?

(SW): Yeah, yeah! That was the only thing out there and it was actually based on a group in Belgium. So, I wasn't using Neil's, I was using the one from Belgium. It didn't take me long to figure out that that was not going to work for me. So, I started doing some other things, but yeah, there was nothing there. Which is hard to believe now, with all of the data that is out there, but there was nothing.

(I): So, what was your first patient like? Do you recall one of those first people that walked into your clinic from Dr. Furman that you didn't put a cane in their hand and tell them to go out the door?

(SW): No, well I started as viewer adaptation, no one was really doing at that point. I did a bunch of habituation stuff and I don't think it worked that well. So, I made a lot of people sick, that I remember! I don't make people sick now very often. So, I think I was so poorly skilled that I was doing what they said in the papers, but it really wasn't working very well. It was kind of frustrating because I didn't know what to do.

(I): So, how did you make that jump to where you were getting changes in people? When did you see that start to happen?

(SW): Well, there was a lot of trial and error. I was so stupid when I started. I would tell Don Cameron, who was the chief of otology... I would say, Don, I don't really care what the diagnosis is, just send them down to me, I only treat symptoms so that doesn't matter. Now, if someone ever said that to me, I would probably bash them in the head because now there is so much data that says that diagnosis and comorbidities really do effect outcomes. At the time, I didn't know any better. I had no rules, so I pretty much did similar things to everybody and obviously it didn't work on a lot of people. So, it was pretty frustrating.

(I): Do you recall your first BPPV patient? Your first repositioning?

(SW): That was actually after I had gone to Hopkins. Hopkins had this big course, in the early 1990's, and I went there. At that time, a lot of people didn't even believe in repositioning. So, yeah, it was early 90's, because until probably 1995 there were a lot of people who didn't believe that BPPV even existed. You know, Shutnik had done this work and there were hypotheses even by Barony years ago, but it was really when Lorne Parnes showed that the otoconia really existed, when he did is canal plugging procedure, that I think people really believed that this was real. Poor John Epley, I don't know how he survived all that mess.

(I): Yeah, he got ripped over coals

(SW): I know he did and he just did the right thing and he stood by and just didn't let those people intimidate him.

(I): Right, right. What would you say would be your biggest contribution to clinical practice? When you look at those early years of when you were just starting out til now. Something you are really proud of.

(SW): Well actually, probably my proudest thing were the "say has come" because I had failed twice at running for the APTA board. So, I said, okay, another door is going to open. So, I decided that my goal in life was to improve care around the world. I know I sound really weird, but I have big goals!

(I): Yeah. Oh yeah, they're big!

(SW): I try and think big! So, my goal was to improve care around the world. That's what the SIC is doing. You know, Ann has done an amazing job.

(I): The vestibular rehab, SIG.

(SW): Yes, I have tried to get people on the right path and she has just taken it and I have no doubt that the things that the group is doing has influenced care everywhere.

(I): How do you take that around the world? What avenue do you do that with?

(SW): Well, when I get invited to teach, I actually demand an internet connection in the room, whether it's the United States or any place else. I always pull it up and one of the things I love to do is if I'm in the Arab world, I show Arabic, or if I'm in, say Argentina, I show the Spanish ones, for the fact sheets and things like that. So, that people can see that even if it may not be exactly their Spanish, it's close enough that resources that other people have already developed can help their patients, living in their country. They smile! I've actually treated a couple people when I was in Kuwait and I printed out, what is BPPV for them and the smiles that you get are so cool! They are so happy!

(I): Now clinically is there something you go back... Because you're in so many different areas. I mean, if you look at your 90 published works, there are lots of different subjects that come up in that. I mean, anywhere from orthopedics to neuro. I mean, elderly fallers, you know various vestibular diagnoses, different BPPV stuff. I mean, there is just...it's across the board, diverse. Would you say that clinically there is something that you, more from a clinical perspective, look back and say, I really feel like I made a difference here clinically, to the way we practice?

(SW): Well, two things, the migraine papers I think, that Diane and I put together really showed that vestibular rehab helps people with migraines. I think that was important. Barrow's work that he did with Pat and I, was the first paper that showed that sports concussions and people with concussions really do get better with vestibular rehab. I think it was key. The thing that I'm hoping will be the biggest contribution, is what I'm working on right now, which is, what we are trying to develop is what is comparable with the fear avoidance belief questionnaire for back pain. The goal is to be able to say, these people are going to get better on their own; they may or may not need PT. By the paper and pencil test, these people need PT and these people were here and need PT and maybe psychology or psychiatry, drugs, or whatever. So, we put together, Jeff Staub has helped us, we have had an international group that has contributed to the Delphi project, and we've got data now on 100 patients, to see...we collected the data and then 3 months later we asked them, I don't care what they did, it doesn't matter. 3 months later, are you any better. So, what we are going to try to do is figure out if the people who got better, do they have this kind of profile. The people kind of in the middle, do they have this kind of profile. Then the people over here that you could pretty clearly see on day one, these people aren't going to get better. It asks things like, "Are you afraid to exercise?" "Are you afraid that exercise is going to make you more dizzy?" Oh, woe is me, you know, the catastrophizers. It incorporates anxiety, catastrophizing, the fear of exercise, the fear avoidance. I think this is really key with out persons with dizziness and I am hoping that that questionnaire will help all of us guide care, so that people get the right care at the right time and that it will also decrease cost. So, we treat the people, who really need us, not treat everybody. So, if that works, which I think it will. That, I think, will really have an impact on care worldwide.

(I): Sort of put that stamp, that Sue Whitney stamp, on this is how I change practice.

(SW): This is a lot of intellectual property.

(I): Right, it's not just you, it's a group effort.

(SW): Very much a group effort.

(I): But, definitely something you brought to the table and participated in. That will be exciting. As one of the things that has come up recently, this movement system diagnoses, how do you think, in this case vestibular patients, fall into that sort of thought process? Do you think it will be an easy fix?

(SW): Oh my God, yeah! Absolutely! I mean, that's what we did when we watched those folks with the uh functional disorder, I can't remember what it's called.

(I): Functional neurological disorder.

(SW): Right, functional neurological disorder. That's what we all just did in that room. That's what we do when we look at eye movements and when we watch people walk.

(I): So, do you think that's a good fit, for therapy to move in that direction. For the APTA to kind of take that as a goal.

(SW): Well, I've been on the first two task forces, so, you better believe I'm passionate about it!

(I): Okay, because I think that's an interesting pendulum to swing because, you know, movement analysis was something in the 90's, when I got out of school, that was a huge thing. We moved to outcome measures and there is an outcome measure for everything now. Well, maybe not everything, but we are trying to get to that point. And now we are swinging the other way, where it is back to, how do we standardize that movement analysis?

(SW): I think that the most important thing is the patient history. Listen to them, ask the right questions, and then you watch them move. That's really what we do as vestibular PTs.

(I): So, it will be a good fit, I think. We've been doing it already, we just need to standardize it.

(SW): That's right.

(I): So, internationally, you travel all over. Your passport is full to the brim. So, you recently spoke at, am I saying this right, Barany Society in Korea in 2016. So, what do you think the future role of the United States Physical Therapist is in the international community? What can we

bring to the table? As United States Physical Therapy and neurology, what can we bring to the table, that you've observed?

(SW): There's no doubt we are the most organized group in the world. The Canadians, I think, have a subgroup, but I don't think they are as strong. The only other group that's probably close is the UK. I mean, there are key folks throughout Australia, of course, and there is a really neat group in New Zealand. In terms of devout countries, I think we still have the largest group and probably the most engaged group of all of them.

(I): So, we can bring organization and maybe stability, or maybe initiation,

(SW): No, I mean, it's knowledge. If you look at the podcast, or even look at the abstract, the link, those are things that can be pushed out internationally to everybody. So, it's the people power. I think we have so much more people power than some of the other groups. Although, if you look at the UK, they are already prescribing drugs. So, in the UK, if I were a specialized physiotherapist in vestibular, you and I would both be prescribing certain medications, if needed. You know, I don't like to think about drugs, unless they are really needed, but they actually have the ability to prescribe a certain formula of drugs.

(I): Do you think that streamlines their practice?

(SW): I don't know. What they are trying to do is cut costs. In the UK, the idea was that if the physiotherapists could prescribe some of the meds, it would decrease the cost. I'm sure their studying that. I don't think I've seen any of the data yet, but I can guarantee that they are looking at costs because that was the entire reason it was done.

(I): So, with us bringing man power to the table, where do you see that going in the future? Where do you see the international physical therapy community moving to? Because you are all over the world, talking to therapists all over the place. What do you think as a vision for the future?

(SW): Well, part of what I'm doing is getting people from different continents to collect data on projects. That's part of what dizzy net is starting to do. That's their idea. So, in Europe, what Dr. Siegel is doing.... he's a really great guy, one of the people we are hoping to invite next year... he's a neurologist, so he is trying to collect data from different centers across Europe, so we can answer and get big data. So, that's their effort. I'm actually working with different centers to try and see if we can collect smaller PT data because you have to have a lot of money to collect big data. Down the road, hopefully if the registry works, the PT registry, if we can collect vestibular data, because right now it is designed primarily to be orthopedic outpatient practice, if we can collect vestibular data, then we'll have big data here in the US to answer questions.

(I): So, looking ahead, we should be looking for ways to participate in that data collection.

(SW): Absolutely.

(I): If we want to make an impact and participate, that's going to be a huge part of it. Tell me about a funny story internationally, as you've made your travels around the world and while your speaking and kind of being an ambassador, in some ways for physical therapists in America. Do you have a memorable story, or one that stands out, an experience?

(SW): Well, one of the stupidest things I ever did was, and I've done many, was in Saudi Arabia, no, it was Kuwait, no it was Saudi Arabia. It was the first time I had been in an Arab country and I was teaching the Horizontal Roll, the repositioning Barbeque Roll maneuver. So, I say there are three ways you can do this. You can continue doing what it says in the literature and slide them off the side of the bed and stand them up. I said you can also kind of put them up in the kneeling position, but all the old adults can't do that. They all looked at me and I looked at them and one of them was brave and said, "All of our older adults can do this." I looked at them and I said, "What do you mean?" And they said, "Well five times a day, we get on the floor to pray, we pray in that position." I was like, you are such a jerk Sue! That was pretty dumb! So, yeah, I was culturally insensitive and I just didn't get it! So, that was one of my loser experiences.

(I): So, maybe that's something too, to be looking for. For us to learn to be culturally sensitive, as physical therapists.

(SW): Oh yeah!

(I): As we grow internationally, what does that look like? How does that work? It's important.

(SW): Yeah, and you're up there talking about bounce and falls and I can't tell you the number of times, I've tripped up, not hit the ground, but there are always wires on the floors and I'm tripping. Probably the stupidest stupidest thing I did was at the Emory Course. Do you know about this? Oh my God, this is so stupid! It wasn't me, it really wasn't, but there was this student, I think he was from Emory or Duke, one of the two. I called him up.... you know the MiniBest, I think the MiniBest is great.... So, Faith developed that test and one of the parts I like the best, is when they lean in and you release and see how many steps they take. So, with every patient, I am like, "Ms. Guard", so careful right because I don't want to write an incidence report and I certainly don't want them to get hurt. So, I'm doing this, and you know Emory, there are like 250 people watching you right there. So, this guy comes up, he leans into me, and I release, right, and he's 22 years old right, he's going to take a step, right. He went down like a tree, BOOM! It was hardwood! Everybody was like.... the gasps... including me! The gasps were like, "Oh my gosh, how did that happen!" I never expected him not to take a step. So, when you're prepared for somebody to fall, you catch them. When you're not prepared, you don't get them. So, yeah, it was mortifying, thank God he didn't get hurt. I have never.... anybody who was there that day, they all remember that because it was so dramatic. So, that was pretty darn stupid. Every time I do it now, I tell everybody, "Okay, you will take a step. You will not fall down on me." Right!

(I): Right! He must have had complete trust in you.

(SW): And I still don't know why he didn't take a step! I don't even know if he had protective extension! But it happened so fast, it was so ugly and was so stunned, it took me a while to recover from that one.

(I): I bet, I bet.

(SW): That was a real loser.

(I): You're on a lot of boards, It seems like every time I turn around or we watch through the conference section, there was someone that you were serving on a board with or are you going to be at the meeting.... something like that. So, you're on the APTA board of directors, what other leadership positions do you have right now going on?

(SW): Well, I just finished.... I spent 7 years, no 8 years I think...I was on the state board of physical therapy. That was me, so I know a lot about that.

(I): Okay.

(SW): I'm the co-Vice President with Judy Deutsch, for the WCPT input group, which is the International neuro vestibular group, so that's cool. I think those are the only boards I'm on. I used to be on the ALS board and that was great. Locally, just locally.

(I): And you were the vestibular rehab SIG chair for a few years. What are some of the...what do you think makes an effective leader in physical therapy? Serving on some of those boards and to get things done. What's the key?

(SW): Well, you have to be compassionate, committed, and you have to follow through.

(I): Okay. Kind of switching topics clinically. You've been doing a lot of stuff with virtual reality and you've been doing that for a while. Where do you see that going? How are we going to be able to implement some of that in PT practice? You serve on the faculty of the...you're a faculty researcher at the Medical Virtual Reality Center.

(SW): Oh yeah, so, here's where it's going. Your iPhone...so there is a buddy of mine, who is an engineer computer scientist, guy in Israel. I haven't seen it yet, but the cardboard virtual reality boxes...you slip it into goggles, you're going to have your phone there. There are definitely problems with field of view. There are problems with vergence because it is too close to the face, but I think a lot of us are going to be using those little virtual goggles. He's supposed to send me the program, when it starts to work.

(I): So, do you think it affect outcomes pretty significantly?

(SW): I don't know. There is no data yet that says it is any better than...here's where I think we have all screwed up, I don't know because if you look at Darra's study or small randomized trial, they both show that it works, but they don't show that it better than anything else. I think we have all screwed up and we have tried to rectify that with some of our newer work in the VRC lab. We've chosen people that are not all symptomatic to motion. So, I think we've screwed up because we have treated all people with virtual reality, who may or may not be symptomatic. So, what we are starting to do now is, we are using Dannenbaum form, the visual vestibular analogue scale and we have modified that a little bit. So, we are using her original and I told her that we have some modifications and so, we are testing the modifications to see if it is any better than her original. What we are doing is, we are screening people and looking for people who have it. Then, we are exposing people. Right now, we are looking at brain function. So, you have visual vertigo, so you score 30 on that scale, okay. We are putting you in the lab and we are exposing you to all these dots moving and we are looking at how your brain fires. Then we are doing age match controls, to look at what they do. We are also doing some dual cognitive tasks, while they are walking and looking at brain function. This is looks at how much blood flow there is in your brain. We are especially interested in the parietal temporal area and what we are trying to do is figure out if you behave differently, or your brain behaves differently, because you have a vestibular disorder and you are visually provoked by these things, versus me, who doesn't have a vestibular disorder. I am dying to know what we are going to find out. Then we are looking at frontal lobe because that is the only thing we can do, frontal lobe function, while they are doing dual tasking and during walking with people with vestibular disorders. The whole idea is, wow how do people behave? And with this virtual reality thing, what we found is, when we mixed people, who didn't have the visual vertigo, we didn't find much, it kind of washed out. We are very selective in who we put in there and I think those are the people who really need it. My hypothesis is that if we treat those people with virtual reality, they are the one's who really need it and then it might be an incredibly effective intervention. When we mix the people that it doesn't bother with the people that it does bother, what do you have? Wash out.

(I): Wash out. Do you think there are other applications for it, in stroke, brain injury, and degenerative disease?

(SW): Oh, sure. Of course.

(I): In what way? Just more motor planning?

(SW): Well, if you think about the walkers we use for Parkinson's disease with the lines eye, that help people with stepping. If you could trigger that...and there is a group that is actually doing something like that...yeah, so it is just people being incredibly creative all over the world with different ways to look at things. Certainly, if you could use the google glasses, they have a name though, it's not google glasses, do you know what I'm talking about?

(I): The one's that come with the film, the Samsung glasses?

(SW): Google...I can't remember what it's called, but you can see the internet and all this stuff. Well, think about if you could trigger, in someone with Parkinson's disease....in your glasses, if you could trigger a step with a light and improve their stepping, improve their rhythmicity, gait. I mean, there are just all kinds of things. I know it's not virtual reality, but there is a group in Israel, who is doing this neat thing with people with chronic dizziness, they think it is all related to where your eyes are in space. That with visual correction, with these little prisms they put on glasses, they are getting great results with people with chronic dizziness. So, I think we just have to start to look at things a little differently and PT doesn't have all the answers. You know, we need to loo around to all these other people, investigate, and try to figure out how we fit and when we best are needed to help people with vestibular disorders. So, yeah, I do think there's a lot of interest in the technology, but the data isn't real clear about who it helps. And people like it! If you get good feedback and you can tell people they are doing well, it's like having a coach there in the room. When people have feedback, they're motivated and that's one of the reasons they come to us. Because if you look at a lot of the work, if there is not some kind of human contact, almost everybody drops out. The OCD folks continue, but the rest of us, we drop out without someone checking on us. So, maybe with Tell medicine, we may be doing a heck of a lot of stuff, in the future with vestibular. I treat people on skype around the world. I was treating a guy recently, from Turkey, who contacted me and he was educated and desperate. I said, set up a couple skype calls and hopefully I helped him. So, Telehealth, which is what Lucy Burgley is doing, also Terri Schram, just published a paper using Telehealth with the Wii in people's homes. This is where we have to go. We have to look at our mode of treatment to figure out when people need to see us and when they can virtually see us. Telehealth is here and we have to embrace it and figure out when it doesn't work. We also obviously need to figure out how to get paid.

(I): That little caveat at the end.

(SW): But it's coming. People will pay. If they stay in their home and they live in North Dakota and can consult with Sue Whitney in Pittsburgh, I guarantee through PayPal, you know, if I put a sign out there and I could legally do it, you know, or you in Southern California, they'll do it. They don't have to leave their home. But, there's that check in kind of thing, so there's follow-up. I really believe that the human interaction is so important, but I'm not sure it has to be face to face.

(I): Yeah. Just in a comment and observation, I see you take that idea of feedback in lots of different endeavors that you do. Whether it's in leadership or in a clinical setting, or whether it is working in a task force. Whatever that is, that's one thing I've observed in you, that feedback, that gratification. I've never worked in a leadership group that has given out so many awards. You know.

(SW): Yeah.

(I): And that's one thing that I've learned from you. That you take the time to acknowledge each individual and give that feedback. Whether it's your patient, whether it's a colleague, whether it's someone doing work on a task force. That statement about feedback probably has a broader impact in situations that you've been in than maybe you realize.

(SW): Because if you don't tell people they're doing a good job, they stop doing it. You know, they aren't motivated anymore.

(I): Sometimes we forget that in our clinical practice. Particularly with our colleagues...that we don't take the time. We appreciate it and we know it in our head, but we don't stop to acknowledge it and say it out loud.

(SW): I do a lot of hugs with patients and I say "you did a great job, I'm so proud of you!"

(I): Do you ever video yourself giving a message and text it to them?

(SW): No, I've never done that. That's really cool. That's a great idea!

(I): Yes, I have a patient with dementia and that works really well because it's like a new message each time!

(SW): You got to remember to push that button!

(I): Well, you know, you text it to the caregiver and they can say, "You need to do this, this is what the therapist said," and they press that button and you get a video message of the therapist.

(SW): That's hysterical! I do video the patients doing the exercises and I think everybody should be doing that. That helps.

(I): For sure. What advice would you give to the new therapist just starting out?

(SW): Read something. Learn something new everyday because that's what I do. It doesn't matter what it is, but I love to read and I love to learn. So, the presentations this morning were phenomenal. I knew some of those things, but I sure didn't know what they knew. I thought woah, I've got a lot to learn, so now I'm going to go home and learn. I already bookmarked the website and I already ordered the book that I'm supposed to read, that they told us.

(I): A lifelong learner, that will never stop. It will never stop. You've been a therapist and been in the medical field long enough, what advice would you give the therapists in the 15 or 20, in that middle age, so to speak, place? What advice would you give them?

(SW): Get really good at something. Make your mark. I know that...I mean, I'm a generalist too, I can treat any neurological disorder that walked in. I could treat some orthopedic and shoulder

problem, I mean, I can still do that, but it's when you really get good at something and dive deep that, I think you get recognized for being good at something and I know that it's really important to be a good generalist. That's really important too, but I guess I believe that there's real power in having a deep dive in terms of having specialized knowledge. I started that right out of PT school. I knew that I wanted to do spinal cord injury and I read everything I could about spinal cord injury, so that I could be really good at that. So, even if you're in an acute care practice, someone like Britta. Britta is so freaking talented and she can treat anything in acute care, but she's the go to person for vestibular and it's really nice for a person to know that other people respect your knowledge and skills and come to you for advice. That's hard if you're just a total generalist, you know. So, that's what I think. Do a deep dive.

(I): That's a good way to end this, I think.

(SW): Sounds good to me!

(I): Thank you very much for your time.

(SW): It's fun.

(I): It is, it's a lot of fun. It's been fun to do different interviews and everyone is different, but I really appreciate your time. It's busy, time is precious at these conferences. So, thanks very much Sue, for sitting down with us. We appreciate it.

(SW): You're welcome!