

>> Welcome to another edition of our Music and the Brain Podcast. I'm Steve Mencher. I'm joined today by Deforia Lane. She's at the Seidman Cancer Center located at University Hospital's Case Medical Center. Thanks for joining us Dr. Lane.

>> My pleasure Steve.

>> Now sometimes we talk directly about the music and the brain and music therapy but sometimes I like to look back a little bit and I want you to tell me a little bit about your musical background and when you first got excited about and interested in music.

>> I was growing up in a home whose walls were filled with music. My mother played classical piano so I grew up with strains of Chopin and Humoresque, Claire De Lune wafting every day and my feet could not keep still. It was one of those times when the music seemed to infuse my whole body. My father's baritone voice made my toes tingle so I was aware of the joy that music could bring but even at age four I can distinctly remember in our modest little church watching how music transformed people. Literally there was what I call excuse me a stone based usher who literally looked as though his face was chiseled from marble but on Sunday mornings if Miss Estelle sang her song his face would literally melt and I'd sit there and watch him turn from this hard chiseled bust of a man to a gentile soft and the tears would flow. Similarly, the mothers of the church, those were the elderly women, they would walk down the aisle on the arm of an usher leaning very heavily because of arthritis and sit down in the pew almost in a way that it hurt to watch but when the gospel choir started to sing and if there were spirituals around they became energized and I could see it in their limbs and in their faces, their arms would extend and their legs would begin to move and it was just one of those things where I wondered how is it that music can do this? So my mother noticed my face and the energy that it created when I was around music so I started piano at five, voice at sixteen and entered the University of Cincinnati College Conservatory of Music at eighteen under a vocal scholarship and life has been one beautiful musical road ever since. That was followed by being accepted into Curtis Institute of Music where I was able to sing on stage literally have some key roles in operas and understand the comradery and that feeling of me, the audience and the music as one.

>> That's fabulous. Now I've talked to several people in the series who made the leap from being people who thought they were going to have careers in music, for whom music was the central thing in their lives to figuring out in some ways that what they were really meant to do was to take that music and help people in a different way than simply entertaining, which is there's nothing wrong with entertaining, we have a lot of that going on here at the Library of Congress but there's something else when you make the leap from being a performer, being a musician to being a music therapist and I want to have you tell us a little bit about that journey for you.

>> The reality of being an opera singer is about as similar to a young boy wanting to be in the NBA. I mean we all think that that is something that's possible but I also am a traditionalist. I wanted to be a wife and

a mother and floating around the country and singing is not compatible with that at times so what happened was I went back to school for a graduate degree and ended up leafing through a catalogue finding this course called Introduction to Music Therapy and it was the perfect merger between my love for music and my desire to serve and nurture people. And once I started that road it took me into places that I could still use the gift of music but in a very different way. It wasn't centered on the applause, and the bows, and the encores, but it was none the less satisfying and fulfilling and purposeful to me either. I just simply learned not just the art of music but then I added to it the science of music and when those two things come together it can be magic.

>> There's some special challenges in using music as you do as a specialty in the treatment of cancer patients and it seems like there are so many different parts of that that I'd like to talk to you about. So let's start with the idea of pain management for example. If it was so simple, if music could help treat pain wouldn't all of the doctors be doing that all of the time and shouldn't they?

>> Excellent. We look at pain as one of the main fears of the majority of our patients, whether they have cancer or not but cancer patients in particular, the needles for infusion of chemo therapy, the bone marrow aspirations, which can be exceedingly uncomfortable, the pain of emesis and nausea and all of those things that accompany, even anticipatory nausea so pain is a reality that everybody in the oncology world faces. So what can music do with that? One of the things we know is that music has a definitive effect on blood pressure, heart rate, respiration rate, it can lower the muscular tension and the anxiety that we feel. Now pain, you can imagine, if you're tense and tight. It's very difficult to insert a needle in an arm that is not relaxed. The vasoconstriction, your veins end up tightening and squeezing and they're so small that it makes it very difficult. So one of the ways we try to use music is to help a patient relax, to learn to breathe, to also quiet the mind and if you are focused on the music and the beauty it brings, especially if it's your preferred music, there's some natural body opiates that are released. Now whether that's why we look at pain being decreased but we do see that patients when refocused on music of their choosing and if it's live you can as a music therapist I can alter its pace, I can alter the dynamics with which I sing or play. I can also create a sense of waiting, or anticipation simply by the pauses in between. So all of those things can be used in a very therapeutic way to help reduce pain and we've seen it not only in the operating room where anesthesiologists have told me they honestly use less medication. We've seen a study at Yale New Haven did one that looked at patients with a patient controlled analgesic pump that they could press and release morphine during conscious anesthesia surgery so they were having something done where they could stay awake and they compared that to how much anesthesia was used to a patient who had their preferred music and that controlled analgesic pump and those with the music and their pump used forty three percent less than those without it.

>> Wow that's amazing. Now getting back to the cancer and another problem or another issue that some cancer patients have is the idea of depression, the idea that they don't have a way to martial their resources, to be present and to try to feel that they're going to

overcome the disease. How does music work there? I ask them the question in previous experiences of challenge in your life what has helped? I want to get to know them personally and then once they tell me if it's faith, it's their family, if it's saying funny things, whatever that could be I ask them to express those verbally to me. I would write them all down and I say would you be willing to create a song that expresses what you're feeling? Could we take this and capture it with a certain genre of music. So I've written many songs with patients, not just for them but with them. Similarly, if a person is not very good with words, we can take improvisation instrumentally, give them instruments of different sort and work with them to express what they're thinking by using those instruments. So the whole idea of depression we address from a point of self-worth, self-value, self-esteem of expressing oneself and making something both artistic and beautiful from that.

>> Wow now as we're talking about cancer and cancer treatments, I know that I've read that you've had your own issues with cancer and that music was helpful to you personally. Now do you bring that story with you when you work with patients?

>> When I see people struggling with the same things I struggled with I couldn't turn off my brain at night and go to sleep. I also had a hard time sharing with other people fearing that I would dump on them or make them feel bad. When others would come and talk to me I felt their anguish and I didn't know how to comfort them. So when I see those things in other people yes I say there were times when I was in your shoes and they invariably ask what helped? How did you make it through? And I never would have thought that this, I've been through cancer twice now, I never would have thought it laid the foundation for me to do what I'm doing now. It was almost I feel that it was a preparation, priming, a sensitizing of who I am so that I could use what I have to share with others and encourage them.

>> In this day and age when the insurance companies and the government and everyone else is so focused on preventative medicine and trying to bring down the costs of medicine, are you finding ways that music is helpful there and that music therapy can really be in the forefront of a new approach to maintaining health and preventing illness and disease?

>> Research, research, research. People value what they can measure and physicians in particular and health care administrators want to see what they can do to drive down cost but also to give people the high tech and the high touch experience that they need in a hospital. So we are as music therapists able to bill under CPT codes, however.

>> What's a CPT code?

>> Oh don't ask me.

>> You can just tell me in general.

>> Well, they're when doctors bill for their services they have to write which particular diagnosis and what codes certify them to be able to do that, to bill and there are different codes for different diseases and

different treatments so music therapists can do that but it is on a case by case basis. It's not cart blank and therefore it's a difficult thing to know that we have something that can be helpful but we don't want to add it on to the patients bill either. So in answer to your question we are doing more research to show that measureable differences can happen when a patient has music therapy. In some cases they are discharged sooner, in others they use less medication. In others they're more cooperative and more compliant and every doctor wants that from a patient. When a person's spirits are higher they're obviously heal faster, they do better. So there are ways that we are and can make this a billable event. It's just that it's still in progress.

>> Well and that's a terrible conundrum of course for the whole health care industry. We're very good in this country and I don't mean to editorialize but we're very good in this country at treating illness and treating disease and here if you are going to be able to prove that you have something that can make illness happen and be over with faster, or not happen at all, or make people healthier, that's not something that the health care system necessarily is going to be able to find a way as you say to reimburse you for and here you have professionals who are excellent at what they do and doing it at the highest levels and are helping keep the costs down for everyone and as you say you have to find a way to be compensated for that.

>> I think the answer is collaboration. Some of the research that I've done I've been helped through it with physicians who know about what things matter in that world. So one of the research studies that I did had to do with something called salivary immunoglobulin A. In our saliva is an antibody, it's a natural antibody and what I did with a randomized sample of patients experimental received music therapy the control group did not and I took a pre and post sample of their saliva to see if one music therapy session could make any difference in their immune function as measured by salivary IGA and indeed it does. It was significantly different and so physicians look at that and they say now this can help my patient let's do it.

>> That's great. Now we recently talked with Todd Macover [assumed spelling] of the MIT media lab and his students were among those who invented the guitar hero and it made me thing that now that I have a chance to talk with you, I understand that you are someone who work at the Rock and Roll Hall of Fame sometimes doing a toddler rock with the very youngest rock and rollers. How old are these folks and what are you doing there and how does it help the kids?

>> Eleven years ago I received a call from the Rock and Roll hall of Fame community director Ruthie Brown and she said Deforia we'd like to start a program to address the needs of at risk preschoolers, three to five years of age. And you can address it however you want. We want them exposed to the rock hall; we want them to feel that this is theirs. So create it and we'll build it. So I contacted many of the preschools in town, many of the head starts and here's what the focus ended up being: Literacy is one of the greatest predictors of academic success so we focused as music therapists on literacy, letter recognition, alliteration and rhyme, those three principles. And what we did was to take all of our music creativity

and we poured it into using music to teach those concepts. We pre and post tested the children with both standardized literacy tests and the ones that we created ourselves and we have found increasingly better results because of their having been a part of toddler rock. This year marks our eleventh year and we have had well over three thousand children go through the program.

>> Wow! I have one last question for you and since we've been talking for two years with some of the foremost experts about music and the brain is the new attention to the idea that music makes changes in the brain, makes the brain act differently, sets off chemicals or activity in the brain. Is that helping bring more music therapists into the field; is that helping bring attention to the field? Respect to you field. Tell me a little bit about that before we go.

>> All of the above. When people become aware, when their eyes are opened their heart's touched, when the research is there to support it and when they experience it for themselves, there is no doubt that they become consumers, they want to know more. I have been speaking lately at physician conferences, nursing conferences, social work conferences and once they find out they say where have you been? Where are music therapists that we can find? Now there are about seven thousand of us in the country. But the more we have programs like these the more people hear it, I think the greater the respect, the visibility, the accountability, the interest will be.

>> Thanks, that's really a great way for us to end that. I've been talking with Deforia Lane. She's resident director of Music Therapy. She's at the Seidman Cancer Center, which is located at University Hospitals Case Medical Center and this has been another of our music and the brain podcasts. I'm Steve Mencher. Thanks for listening.

>> Thank you.

>> Thanks so much. That was so much fun. This is what a great.