The picture on the right is wish you look like at the end of the treatment. There was no weight loss and no exercise involved. So, we did this as an experiment to see people's that do not have a manual therapy process, and if we could get these results. We have reproduced this over and over again. They had seen this happen repeatedly.

So, channel 2 is your target tissues. You name the tissue we more than likely have a frequency for a. We have more mileage than others, and on the physical medicine. Anything having to do with pain. We have a lot of mileage that we reproduce what happens over and over again. We put it together. And you talk to your patient. My first influencer, the person that profoundly changed what happened for me as a practitioner, is Dr. Janet travail, one of Kennedy's position within the White House. A brilliant woman. She wrote office hours day and night. And also Air Force, they wrote the books, myofascial pain and dysfunction due to trigger points. Those were one of my early training manuals. And what she taught me in the early years, while she was with us, if you look that the patient, they will tell you what is wrong. As we are listening and watching, they will tell you. Remember to take those words when talking about pathology, and you can come bind it with the pathology. And you can do it with the target tissue. The issue in the tissue. And this is where we can get to what is ever perpetuating pain, dysfunction, illness.

When we look at the language, we are looking at numbers for words. Inflammation is 40. And muscle, and artery. Primarily muscle, that is 62. Notice 40 on the left-hand side, 62 on the right-hand side. Anyone that saw 40 and 62, they would say they had an inflamed muscle. The information is the issue. 62 is the target issue. If you had trauma to the muscle, 294 is tissue trauma, 62 muscle. So, anybody who looks at these knows exactly what is needed. That is one issue and one particular tissue.

The reality, all of patients have multiple things wrong, and either one tissue or multiple tissues. This is usually what the frequency looks like I'll and how we start pairing issues with tissues. If someone has a muscle inflamed, and basically has calcium deposit, you can feel them on the bottom of your feet with that crunchy stuff, calcium deposits. It is a natural anti-inflammatory the body. Whenever there is information, we will get some crunching, back could lead to scarring and tissue. So, the frequencies for those three issues are 40, inflammation, 91, calcium deposit, 13, scar, and applying all three to 62, the muscle. And then someone may have one issue. They have inflammation in their spinal cord, nerve and muscle. Now you have 40, and you have them 10, the spinal cord, 396 which is the nerve, and 62 which is muscle. These are real patients. They have all of those things wrong. And the court, the nerve, and in the muscle. This is where the rest comes in, you can do inflammation, 40, thus Rhinocort, nerve and muscle, and then you can adjust the calcium deposits in the spinal cord, the nerve and the muscle. You can go back and address scarring of the spinal cord, the nerve and muscle. Or you can do inflammation calcium deposit in the spinal cord, and in the nerve, and then you can do it in the muscle. These are the variations. You are still getting the frequency. And sometimes it does matter if it is worth the [Indiscernible] of doing this comes in.

Here is the good news. You do not need to memorize all anyone likely did not get the language, and you may not have an idea of what I am talking about, that is way too complicated. The great news, you are landing into frequency specific Microcurrent with all system, and particles that have been tried and true for two decades now. They are actually already put together for you. That is exactly what they are testing with Air Force Base, not a single person had to learn any of this. Have working knowledge and understanding, and all those people may think they need to know all of this to understand it. But basically, the devices are [Indiscernible] which makes it easier. However, I think it is important for people to understand the frequencies. So, when you see them come up, and you understand what is happening with the clinical reasoning on why we are sorting out what we are sorting out.

This is an example for acute trauma. These are the most common frequencies for any type of trauma, anything acute, any new injury that happens. Notice the first frequency, stop bleeding. And addressing trauma, trauma to the tissue. We need to get the tissue working, it was torn and broken with allergy reaction. You know there's going to be inflammation. There may be nerve irritation, pressure and congestion. So clinically that makes our complete sense to you as to why you would want to think about it. But the challenge that we have, is that the Avenue injury, you are going to rest, ice and do whatever you can. We can do acupuncture. We have not had a lot of choice. Now there are things that we can do now to change the outcome. And then we have a very specific see that we think about for persistent pain. This is where you can start diving into going back to the tax, and my pathophysiology and what is really going on. I can actually do something about this remember, in the chat was told people that have been on chemotherapy agents, they get peripheral neuropathy, or chemotherapy burns. She uses these frequencies to do something about it, whereas before with just bad luck, so sorry, I'm glad you are alive. That is one of the unintended consequences and side effects but now we can do something about it. Notice on persistent pain, this is where the to come in for calcium deposits, scarring, sclerosis and fibrosis. Things being chronic. We would never run these on a new injury or trauma, that is why the particles are very different. The path allergy that is happening is very different between those tissues. Here is an example of all the conditions, the frequencies -- these are channel 2. These are all the target tissues. Frequency for brain tissue, spinal cord, peripheral nerves, full of your muscle tissues. For the discs and the spine, for joints, for the joints in the body. The vessels, the capillaries. It is endless. There are a few frequencies that we do not offer a specific problem, but for the most part, the frequency for just about everything.

Now what are we going to do about delivery? The reality is that it does not matter, as long as you have equipment designed with two channels that you can have a frequency on one channel, and a frequency in the second channel. And then we won't to have specificity. I see we have a question. I will answer in a moment. We want to be able to go anywhere from zero to 999.9. That is having to do with the frequency. Potentially creating a pattern. Using conductive materials to get the current through the body. We have particular setups which I will show you and

give you the rationale. You can use conductive materials, there are gloves that are silver masher graphite, different conductive materials. We brought in all of these sticky pads. I told the team as soon as they see their conductive strips they are going to want that. They will not want to do the sticky pads. That is what happened. You can keep the stuff clean in a clinical setting. They are using great paper towels and wrapping the conductive material. I will talk more about that. And then you can throw out the paper towel. Then some of the materials are indestructible. You can use any type of cleaning. Different devices work with different ways. Typically with the channel devices for [Indiscernible] if you had single frequency devices like -- anything that is a single channel, a lot of those are [ Indiscernible ] they get into the body and they work differently. I am not that type of person, I am a gadget girl. I have these devices. To me each one of them has their sweet spot. I hope we will get the data on that soon. The Department of Defense has been using these devices. The is the dual channel, [Indiscernible] I own all of them. And I own [ Indiscernible ]. A lot of you may be using [ Indiscernible ]. It is coming through with our current into the body. They have a proprietary wave form, I do not know what it is. That is their secret sauce. They have so much data put out on it. They can actually help with pain, and relaxation and anxiety. Which is huge for calming the mind. This is where you can do it with running it through the body, or you choose the algorithm. They are set up for you. You do not have a lot of choice. The same with Avazzia. They have some mileage on these and we have some idea what works best for a while. These are coming through. And it really seems to matter what the wave form. Could not get Avazzia with two units, we try to do it. I went in I worked out of Avazzia in Texas. Trying to figure out if we can get the same results with two channels. Because the Microcurrent gusto chemo/XRT works on scar tissue better than anything I have ever seen. That is my device of choice for scar tissue. And stimulating the vagus nerve in several. -- The wave form matters. We use [ Indiscernible ] astronauts have done these. Photons work which increases pEMF into the cells. There is a device that we have that -- they have had these devices this is where it has four channels, two channel and light therapy. It works great going into acupuncture points. These are things that have been available through the D.O.D. Some of you may want to check your closets to see if someone is hiding some of the equipment, and you just did not have someone to train you on how to use it.

Here is an example of the devices. I'm going to use my arrow. I hope you can see my arrow coming across the screen. If someone could just answer whether they can see my putting their hands on the device. No. Okay. Let me see if I have the ability for my pointer. This is me not knowing how to make the point to work. Can you see the green pointer? Yes, thank you. I am being a little klutzy with it right here. This blue box in the back is the original two channel analog box. It is big and clunky. This is what all of us started on. That devices no longer made, but obviously you could not travel with it. And this is this is the Acutron with the four channels. This is the one that does microcurrent and light therapy.

This is the mend device. That little, tiny device replaces that big blue box in the back. It has all the protocols automated. It is super easy to use, user friendly, you can take it with you everywhere. It is easy to

transfer. This is a precision custom care. It holds about 50 to 60 protocols. It has all of this. It is pressing go and you cannot Modula come whereas you can module anything you want to do with this one. If we go up here, this practitioner is holding that Avazzia device. Using a wide bar electrode delivering current into the body and doing a treatment on the back. And this other device. This device right here. It is called [ Indiscernible ] broadcasting frequencies, as well as a electro pad delivering frequencies. It is microcurrent. These are an example of where practitioners use all these different devices together. This is what is happening at the Air Force Base, allowing us to get a lot done at once. It is actually fine to combine all of these different technologies together. We want to make sure the polarities are matched.

Somebody asked about scar tissue. Interestingly, on this, their frequency being low or high does not seem to matter. Meaning, meaning the hurts. Scar tissue being 13. And for instance, toxicity, there is a toxicity for toxicity that is 900 there is no mathematical rhyme or reason. They're very close to each other doing different things. Sometimes the frequency on channel 1 and channel 2 are the same but they act differently, whether a condition or a target tissue. I do not have the answer for that for sure. >> This is the mend professional. I will not spend much time. Simply because this is in your notes.

This shows you in the 21st century, the equipment that is come out. We have amazing flexibility with what we can do in the clinic. And in this particular device, holds up 999 protocols preprogram. You can do pressing go for everything under the sun. I have never been able to film my box yet with what I need. It is super user-friendly. This is what they use. Then we have a mend wellness device, which is a version that gets typically given to patients for home use. They cannot Modula everything. The protocol is set up specific for them. This is press and go for the patient. What is nice there are scroll features, there is a backlight teacher. These devices are very simple to use, once they are programmed.

The thing about Microcurrent, and I would say for all of you anytime you do any bioenergetic treatment a device, make sure people are hydrated. Water, water, water. Here's that picture again. It shows you hydration the body. It is really important. This is how we get the information to the body, and the cells and the proteins that we are thinking about, and basically it is as this matrix. Delivering all the information body ways. One of the reasons of treatment the wall Daschle will not work, you need to check whether hydrated. As practitioners, if you decide to incorporate this, you will find out that you actually get dehydrated yourself. I am going to stop see the questions for a moment. How is this reimbursed by TRICARE, private insurance, this is private pocket? First and foremost, microcurrent remember has to be cleared with the FDA. There is a code for using two channel microcurrent. And those 97014, and 97032 four attended an unintended. It is the code for active punching -- acupuncture. [ Indiscernible ] it is reimbursable. In 15 minute increments. I will tell you in my practice, when I was doing insurance. And the spine practice in rehab, where we always did insurance. We would be doing manual therapy, exercise and other modalities. Sometimes we would run Microcurrent on patients and get that insulin would be more successful with our other modalities. And what you may only do for one

unit, even though you did more. The treatment is more successful with it. And then you bill for the other hands-on. In fact, there is a code. There is also a code for two channel, although sometimes you have to have unspecified. I have had times with have completely covered the cost of the device, they are much more expensive than a TENS device, however sometimes if it is capped with the insurance, they have a maximum reimbursement. Most patients pay out-of-pocket for it. I do know that these devices are in the process of being on the GSA schedule for practitioners. Also, right now even though it is in process, the pricing is set up specific for GSA pricing. It is instrumental in being able to have that new one. It is reimbursable from a standpoint used in the clinic, although the reimbursement levels are very low for what is happening in my opinion. And sometimes the devices are covered I do not believe TRICARE covers them at all. Sometimes workers comp, PIP, and other private insurances will cover it.

Here is the things about using these devices. Remember, I do not have any affiliation with anyone. I am a practitioner. Every time that I have been around something from a manufacture, they say this is the best thing ever, works for everything. It will even wash your dishes. But the reality cut does not matter what we do, there are times when things work and when they do not work. The best thing to do is to know what to do about it. The most important thing with two channel microcurrent is understanding the mystery, and the history. Now since we have specific frequencies, and a framework starting with the nervous system coming down, now that history matters. If anything has been detrimental to medicine, it is the content and constant squeezed for time. Doctors and practitioners being told you should be able to get every bit of information needed in 15 or 30 minutes. We do not get to practice the old-fashioned medicine anymore, we get to know your patients and I would is going on in their lives. With Microcurrent it matters. The model that we implemented -- sometimes they will get this history over three appointments. They get the most critical stuff in the beginning. This will give us the best results, so we do not miss something. And then you will use your pain scale to figure out what is going on before and after. Remember almost everything that we have is the active. There is very little that is truly objective. Other than what we can do with the work. Even imaging is not. You do not know if you are seeing the imaging and what is causing the problem. Reflexes, I rely on my neurological exam. Most people are pretty straightforward with that. Reflux done correctly it allows to get some objective findings. And they are using the Dallas pain questionnaire and the promise which has been helpful about getting functional information and patient satisfaction.

We want to look at the different metrics. And whatever you are using to evaluate within your clinic. Metrics are important and keeping data to see things changing over time. If it is effective, you will continue with that particular direction of what you were during. And what you have hypothesized until you have maximum improvement that you think is possible for the patient. And early on I taught everyone to do a rescue frequency. When we treat early on, upstream of the nervous system, hugely [ Indiscernible ] they will give you the best results getting someone out of pain. When you find those frequencies, that particular particle, I refer to it as a rescue frequency. And as a physical medical

practitioner, if I start doing more activity with the patient, I have been doing more activity, I am actually getting them back to life, about to function. All they have to do is go back to the rescue frequency. If it works for one, it will work for that particular problem. The other thing that happens, you get big resolution in pain, which definitely happens. Patients sometimes with subsequent appointment say, this is not working that well. That is because the changes are so much smaller because you have a big change in the beginning. And you want to be mindful of that. And the other thing that happens is [ Indiscernible ] when you have someone with a dramatic release, and then may have five days of relief, then the pain comes back off because the brain resets, when the pain comes back they may actually think that it is worse than it was before, but it was that they had a vacation from it, is things we need to be mindful of. I was going back to the rescue frequencies that we have figured out, if it works once it will always work. And if it does not work, the first thing we think about is properly hydration, and once we have that sorted out, we need to go back to that history. If you did not get enough information from the history, if they forgot to tell you something really important -- patients are making the decision without your permission what you need to know and what is important. I did not think I needed to tell you about my low back injury, and surgery, because I am here for my knee. They do not understand that the L3 or the L4 nerve could be what is causing her pain. So, you do a local treatment and it does not work that is because they forgot to tell you about what happened to their lumbar spine. Those are examples where we need to go back and get the history. There are ways we can target to get more quickly. And then time. This is the big thing we learned earlier on. There are some particles that take a lot of time. We need to have room and the early parts of treatment, where you can have a procedural room, the acupuncture room. [ Indiscernible ] assistant will check on the people. Those earlier treatments and having time is important. There are times we can do some things that can increase pain, and reasons for that. If people get more functional and they can irritate some of the neural tissue. When we go through the full course, we always make sure that practitioners understand to be looking for that, and what it means, and went to educate the patient. 80% of the time the patient will respond. And we have tested these protocols for years and years. We know they work. You can set it up when your clinic is pressing go for the most part. 80% of the time you'll find there is some type of neural component that is going on. But it is really driving what it is. It is going to be in that case history. And when you go back to get the information. It is going to pop out to you. Very rarely, if there was a time where there is a problem, where neural tissue is not involved in some way, so we always include.

I talked about where we have to make sure we are making a deliberate distinction between something that is acute, or some type of trauma happening now, as opposed to something that is chronic the protocols are very different, and very specific for trauma. As opposed to chronic injury. We treat them differently. And the waveform is different. These are all free program. Especially the trauma ones. Pressing go, nothing you can do except the conference stuff you would normally do, that the frequency work for you. This is where these viral genetic devices of all kinds, whatever you use, they become an extender provider for you in the

clinic and help you and allow you to treat wall in another room doing something else. Just remember on trauma, if it is going to bleed or bruise, if broken and injured you have a new injury. The one thing I drive home, people start doing this, I do not care if you have Mrs. Jones coming in 2:00 for her chronic shoulder problem, she has been doing great, pain under control, working on scar tissue and mobility. She is coming in for her appointment for the chronic shoulder problem, if she falls down the parking lot, or if she trips, where she sprained her ankle, or she hurts her wrist, where she gets it, or something happens, you are no longer treating chronic shoulder but the acute injury that happened on the way into the clinic. This is always the very first thing that we treat, whether it happens on the way into the clinic, or if someone says I have been seeing you for XYZ cup persistent pain problem, but I was just in the car accident. You suspend the chronic pain and treat the acute injury. This is where getting early enough for the window matters. It -- if we get these trauma on people immediately, we dramatically change results. Even in the first 24 hours, we will get the pain down. And hoping that nothing happens in the early treatment time. We can push it out to six to eight hours, but P0 to four hours, magic. That is because we reduce the bruising, because it seems to stop the bleeding, which stops the signaling for edema, and congestion. Which then allows the good stuff to get in, the bad stuff to get out. The inside voltage of the cells is maintained, because we are getting the information in, so the communication is there for healing.

So, this is a crazy Star Trek medicine, when we are able to do this right away. I have had athletes and dancers where I literally healed a fracture in two weeks because they need to get in immediately and get the protocols where they had a device and treated immediately. So, this is the technology that the NFL is using. Last year the Kansas City Chiefs won the Super Bowl, this was technology used. On the field and the locker room. This is the technology they are using. This is where we can do magic if we can get these new injuries. Let's think about this from a military standpoint. When people go into basic training, or they are doing six weeks of brutal working out, we all know that if you get delayed on muscle soreness, and muscles do not fire properly, with the right timing. Because of the pain, this is where we end up with joint injury, especially knee injuries. What would happen in basic training, or anyone doing this, getting ready? Getting ready for physical testing or any type of athletics. If we treated immediately for delayed onset muscle soreness, we are able to immediately treat for these traumas. And these acute injuries. It would traumatically change what happens. I have had the great pleasure of working with Dr. Hoffman, whom some of you may know. I was selected for the medical team for the warrior games last year. Also [ Indiscernible ]. We had so much mileage on being able to use these protocols. They were already dealing with pretty serious complications. They had already been injured. We turned around so many people, Air Force swept the. And in Tampa last year, this is the technology used also.

Delayed on onset of muscle soreness. I showed you this technique can change what happens from a readiness standpoint from the military. These are the different things we can think about. Press and go, super easy to use, we want to get on as quickly as possible. All you need to know the

mechanism of injury, all the protocols pressing go are descriptive for exactly what is happening. And remember the plan to trauma is called surgery. This is where there is no reason not to be prepared entry immediately after his surgery. We have preop protocols to get people ready. And then postop that we ideally want people to use in [Indiscernible] or as soon as they get to the room. These are set up, pressing go. A lot of surgeons that are using to channel Microcurrent, as well the hospital. We got to see some great results.

Now we are going to move into chronic pain. We are going to take a break at 3:00. We will take a 15 minute break. We will get through the last part. Are there any questions? Mark asked do you do a lot of muscle testing? When you ask Mark about muscle testing, is that applied kinesiology, true medical Mustang desk muscle testing?

Yes, then the other. So people use both if they are trained in doing energetic kinesiology muscle testing to see if someone is testing stronger week, people absolutely do that testing in order to figure out what protocols to run on people. And testing for frequency. There are other ways to do that. I always do full neurological evaluation.  We will talk about that with true martial strength.

Is there a particular harm and incorrectly programming frequency due to misdiagnosis? The only place you are going to get in hot water, which I hope I have driven over and over again, if you do not delineate whether acute trauma, or a chronic problem.  You are never going to harm anyone by running a trauma frequency, even if it is a chronic problem. If it is a trauma, and you are running chronic, you can actually make things worse. I will let you know that I allowed myself to be a laboratory animal, just because I wanted to see if it was true. I had a great three ankle strain that I completely healed in seven days. I completely did the whole thing, and I was back on brace and crutches after I ran chronic frequency. That is really important. Other than that, if you use frequencies that someone does not need God does not work. That is why you do a particle. The good news, it is not that the frequency does not work but we did not have the right information. The patient did not tell you about the lumbar spine.  And that is what is causing the knee pain. This is where we become much better clinicians and ask more questions. Because it is like, I wonder what is the story behind the story behind the story? And the tissue behind the tissue, behind the tissue causing the issue. This is where we go back and get away from how we have been brainwashed because of all the time constraints that we are put on to treat the symptom. Now we have a way to go back and find out what is the story behind the story, and I will give myself time to ask.  I hope I answered that thoroughly. Any other questions before we dive into this last part before the break?

Am I talking too fast? Are we good?

Okay, thank you.  Physical trauma, brain trauma, emotional trauma. Getting the history make such a difference. When people talk about it, oh my gosh that person gets miracle results all the time. The reason that I consistently get the results that I get, it is not because I am from some magical person, it is because Janet Jabal taught me to get the

story to get to the history. I was doing that before I was even in acupuncture physician and practitioner.  I assumed that is how everyone was doing medicine.

Any patients that come in, they may be coming in with a muscle problem. There is always a narrow topic component. I was in an orthopedic spine surgery rehab clinic, I have a myofascial private practice clinic but having access to thousands of patients, is we need to start upstream with the brain. The brain is the master controller. And the master controller brain communicates with the body via the superhighway that I call, superhighway which is the spinal cord. And then we have the peripheral nerves going out and branching out and innovating the muscles. The muscles contract and move the joints. All the structures that interfere with that pipeline, when we only treat symptomatically, and there is nothing you can do to reach the rest of it, you have to say -- you have to think about it. Now you will have a tool. We need to think upstream. And certainly, the emotions which we will talk about. This is involved in all this is my model and how I created these algorithms that we were able to test and employ these seem to be working.

Whenever you think about someone with myofascial pain, trigger points, remember there is always a neural component.  Muscles are innovated to move. You have a Ference and E ferns. Not only to contract they are sending sensory information back to the brain. This is what is going on. And this is what is happening. He always have this two-way communication between the nervous system, and in the end everything is being processed in your brain. Here are some of the frequencies. You do not need to memorize.  This is set up so much easier where it is pressing go. It is good to have an understanding of what you are doing. But no need to memorize them. You can look them up.

Even though my specialty is myofascial pain and dysfunction, that is where I am an expert. When I think about the myofascial system this is what I think about. My brain does this entire mapping for what is going on, systemwide with the communication. I can do something about it. If we actually look at the nervous system, thinking about mending the painful communication links, and the control and perceive the myofascial system, this is where we get Magness event result. -- Magnificent.

In the end, it is all in your head.  Everything that we are doing and feeling, had. Brain. Remember, this is what we got so much happening to the brain function. We have trauma, we have concoctions, auditory -- can -- concussions. [Indiscernible] also what is happening inside your body. I always start with a concussion.  And every single Microcurrent practitioner knows to start with a concussion. When I think of the word of concoction, this comes from the model. It is not just TBI, dramatic brain injury, literally physical trauma, but also overwhelming input from the vagus nerve. And from the Medela. The nuclei for the Vegas is in the Medela. When we talk about standard concoction, we talk about what happens in the medulla brainstem. And when I think concussion, has this person had some overwhelming spiritual assault about their faith? Is there psychological trauma? Is the immune system which we see a lot right now, people are getting [ Indiscernible ] with COVID-19  and the  immune system.  People with chronic infections, multiple infections, toxic

exposure.  We have so much from pesticides, environments, cleaning agents, and certain people in the military free go back to the veterans, before we knew better, they did not have all the protective equipment. They were exposed. And then emotional. We will spend time on the at the end of the day.

And spy, this spells out the word spy o the best efforts, we cannot always review our own system, even if you have some kind of meditation, prayer, yoga, exercise counseling. You are doing these things to get a reset. And in the current environment this does not work as well. This is what I am talking about with concussion. This came from Ben Gelder. And basically, he said that in the nervous system, spit Co., from the Medela that this is the area of the brain that is coordinating or the incoming and outgoing traffic. This is basically where we have the assistance from what is going in and out and producing and modifying motion. This is where we see the autonomic motion. And in regulating that nervous system, this is happening for the cranial nerves, and the peripheral nerves. Remember the vagus nerve that is what Dr. Tracy was giving. He talked about how he was able to modulate the immune function. That vagus nerve is that nerve that goes everywhere, it is a two-way communication, not only is it telling your brain what is going on, your brain is also telling your vagus nerve, I just saw this thing, we have a threat everyone prepare. Whatever is happening in the environment, we may not be able to be said. That is the concussion. It turns out it is involved in allergy reaction in the body. And now we are seeing a lot more at [Indiscernible ] this is where we go into this modality to  help reset the vagus nerve with communication. We always want this protocol on everyone at least once. People seem to recover better. It is like taking a computer at of safe mode and rebooting it. If something bad happens you can go into safe mode on a computer and not lose everything. You can get it to be set. We are always going to do this with a true TBI.  As well as trauma. Since we are starting with this, this is a great way to figure out how people respond to Microcurrent This was a particular protocol writing in the very beginning. I talked about the fact that when they check the subset patients, that beta endorphin increase. This was the protocol running. It seems to bring up serotonin levels. There is another protocol that I developed or published in 2012. I have been doing it for a couple of years. Now we actually know that the body does not do well when there is overwhelming auditory shock coming in, or any type of information that overwhelms the body.  And so, this is where there is a specific frequency combination, 94/94 trauma to the Modelo, is one of the frequencies in that protocol. Rather than running it for a few minutes, we are running this for prolonged period of time. And we reboot the area which is 321. You do not need to memorize. And then emotions. We get overwhelmed.  So, with young kids, especially with my athletes, people that have had bilateral tight shoulders, tight neck and arms, hamstrings, tight everything got this was a magic protocol. Where I could get everything to just let go, when nothing else was working. Almost all of these people had something pretty significant that had happened in early childhood, or birth trauma. Or there have been some serious injury. Or prior concussion. Remember, all of us, especially my age group, quit your crying can't get up and brush yourself off and get on with it. We did not realize that these traumas over our lives have actually accumulative effect on us. And then you wake up and you are 60, something is going on.

This is where we want to get them while they are young. In the brain tissues we have a variety of different particles that specifically address different parts of the brain. It can be injured with the TBI, whether a front impact, back, or side impact. And if there has been any kind of torsion or injury to the brain. People with orthopedic disuse, because they have been casted for a long time. Or in some type of splinter crutches or a cast. All this information about your body goes into the spinal cord, and into the brain and is mapped to that motor sensory cortex that you are looking at. There brain re-maps him what it needs to do get on life this is where the myofascial comes in.

I am going to give you a case now. This is a picture of AJ [Indiscernible]. The heart is neurologically connected in an integrated way. Yes, I can do an entire class on the arch and the nervous system. The heart communicates before the brain. And what you use for shock trauma. [ Indiscernible ] it is called shock trauma. Where do you connect them up? I will show you after the break. I will show you this set up. All the one from the service desk a central system. We are following the spinal cord into the [ Indiscernible ] area.

This is [ Indiscernible ] brought to Jacksonville, Florida in 2016. I was working with Dr. Dimitri, who has retired. Therefore, he was a flight or and test pilot, occupational medical doctor. And the assistant Surgeon General for the Air Force. He retired and he was actually trying to get the Air Force to start introducing all these different devices. He had been through some training. And basically, I do not believe he thought [Indiscernible] he brought some of these cases to Jacksonville I took over the clinic for a week and I did a demonstration to show what is happening within the clinic. And how we did these different protocols. He was supposed to be my easy patient. Dr. Dimitri tell me that he just had his right shoulder problem. Andy had been doing laser. He could get the pain to go away but nothing held. This should be easy.

Be -- I found out that his friend Agee, who never told anybody much about it, he had had a stroke 4 years earlier. The good news, he was already at the house to get an MRI of the right shoulder. That is because he was already having shoulder pain. Nobody could figure it out. While in the hospital to go to this, he had a massive stroke and he coded he did in a good spot in the hospital. And not his car. He was in a. Basically three months of rehab. He actually coded twice. And he continued to have right shoulder pain. That was the least of his problems. He lost the use of his right side of his body. They got a lot back he still continued to have loss of cessation on the right side. And we did the neurological examination. Dr. DERT Dimitri did everything behind me. He had no upper or lower reflexes. And loss of range of motion in the right shoulder with pain. He walked down the hallway with a limp. What he wanted to do is play golf again. So, the standard concussion protocol that I did. And then we did the trauma which I told you about. We actually went very long version of this. I reboot the forebrain and the cerebellum. Using a medical word, of course there are frequencies to go with it. That took about three hours. AJ was a terrible sleeper, probably about four hours per night, working long hours. He ate very badly but he eats well now. He was completely sound asleep. Just knocked out. He thought he was going to stay awake for all of it. We let him stay asleep for four hours. When he

set up he had full range of motion of his right shoulder. I have never done any myofascial work. He had absolutely no pain. So, on the next day we ran some of these protocols. I was able to get back all of his reflexes, which Dr. Dimitri came back and he saw it. He thought that was impossible. And on day three, because we got back the reflex, I had Dr. Dimitri use the Avazzia device with a nonrepeating algorithm. The brain is always looking for a pattern. Once it figures out a pattern, it says I do not need to think about that anymore. Once accommodates. So, with this nonrepeating algorithm there was no way to accommodate. Which means that he had to keep paying attention to it from the standpoint of the nervous system membrane. After around 45 minutes, he actually got back all of his sensation. So, AJ went back to Washington, D.C. He is the chief of procurement for the BA. He was a very heil level meetings all the time. He was going and found papers up and you, [ Indiscernible ] he went and he did jumping jacks. She looked at him and said, that is impossible. AJ did write a letter, but we never had any follow-up. This case, along with seven others that I saw in Jacksonville, including one of the retired chairmen, we had a huge outcome. This is what led to the demonstration with the research.

The next thing that we go into after we address the brain is the spinal cord. Anytime you have patients that come in with fibromyalgia, complex myofascial pain, or trigger points of your own, they have had a spinal injury. Any type of persistent pain, people that develop persistent pain after surgeries, and any type of chronic nerve pain. We always think the spinal cord. It is the information highway. And we want to reduce inflammation. Once we reduce inflammation in the spinal cord, go after the poor will nerves. They are 396. Typically, we will have polarized positives. Positive leads where nerve roots exert the spine. And in the negative leads at the end of the nerve, or the spinal cord. You can do that below the belly button you probably have a patient with the same complaints. If you go back and ask the question, you will find out that you did at some point have a neck injury, either whiplash, they fell on their head when they were a baby, or birth trauma. Or athletic injury. They fell down the stairs. Something that happened. Anyone with bilateral hand and foot, [ Indiscernible ] you want to look for the spinal cord as being the problem. There are people that have these chronic, high pain scores. Aching, burning, stabbing and tingling. It moves around. Like somebody has a voodoo poking them in different places. These people may be on narcotics. It is not really helping so much. They are trying to do something. The reason that we end up with these issues, more than likely, because we have overlooked the fact that people can end up with these tears in the cervical disc. And basically there is a high concentration of [ Indiscernible ]. People that end up with pain in the neck or back, usually genetically have a very high concentration. It is the same with rattlesnake to give you an idea. Narrow toxic, highly inflammatory. Basically, you have people who have a camel radiculitis, causing inflammation into the nerves, and into the spinal cord. And those and material lateral tracks most likely adjacent to the disk where you will have one of these injuries. Now you have a problem, you have a conductivity loss because the area is highly vascularized. And then things can start to spread out. You get the pain spread. Thinking chemical radiculitis, with these people. That explains all the way down and up while we have all these strange symptoms. Because the spinal cord

can actually cause it. Interesting, this was published a very long time ago. We have known about this. Listen to your patients. If it has been going on for a long time. I am really big on getting imaging when there has been no explanation as to what is going on. We can deal with this with Microcurrent.

The other thing that happens, if people get imaging, an MRI that is normal, because you have a bulging disc not coming into contact with the spinal cord, and they are not reporting the tear. Interesting desk I was just teaching at [ Indiscernible ] and I was told that because they were getting all of these firms, they kept seeing these annular tears. Matched what was going on with patients. They were getting the results with the protocols. He went up to radiology and import the films up in the ear. Do you see in annual tear? Yes, we see those all the time. It was not reported. So they see them all the time in these pain patients, but considered normal because so many people have them. This is why I read my films and I try to teach people to do this. As well as x-rays. If a person has old injury with instability, if they have a [Indiscernible] and there is movement in the vertebrae because they are not stable, you have a bulging disc, you have this perfect recipe for cell draining chemical radiculitis with the spinal cord and the nerve roots. That is something to be thinking about. Granted we have never really had anything to treat it directly, but with microcurrent these particles seem to work.

Somebody asked about the setup. This is an example either using sticky pads, or damp towels. You can wrap the electrodes into the paper towels that are damp, and then you throw them away when you are done. Patients do not mind it at all. They preferred over the sticky pads. You can use either one. This is an example where we have the conductive material inside of the towel, loosely wrapped around the neck. We will go either to the fee, or the abdominal area. I can tell you for the last 3 years, I have been going to abdominal, even with patients with fibromyalgia, and it still works. Their research that was done, [ Indiscernible ] I always include that when I teach. And I explained why.

Here is the good news. For all of you, anyone that incorporates this where you go into the dark, [ Indiscernible] if all you did was to run a standard concussion protocol with shock trauma on the people that can tolerate it that do not have the fibular issues, there is a small subsection of people for which that can happen but it is rare. If you run these two protocols and follow it with treating the protocols for the spinal cord. We can reduce so much pain and suffering with people. These upstream tissues that we have not been able to get to, and address and resend the central nervous system, sometimes this is all we need to do to calm down people and their pain. And there are certain clinics that say, I never make it past spinal cord. And people tell me that the pain is gone or gone down dramatically. And these are the magic particles. These are all press and go, easy to do. You have already learned them. This is the biggest part of what we do. Microcurrent is the protocol.

I will give you one more case. We will take a break. Is everyone okay if I just finished this last case? You are allowed to say no.

Yes, drive fun. Thank you.

This case really pulled on my heartstrings. This happened earlier on in my practice. I was working not only in private practice, but also helping us spinal surgery and rehabilitation clinic. I was training the physical therapist working with these complex patients. We kept a lot of people off the operating table and from having to have surgery. Usually, it is the pain that people cannot tolerate, and in the absence of neurological symptoms, if you can wait it out body will reabsorb them disc in most cases. I was working with this young lady's grandfather in the clinic. He had a spinal fusion. I was doing some Microcurrent and rehab he was doing great. He separated for a long time. He said do you think you can help my granddaughter? He had RSD. Different in children than adults when we use microcurrent. I do not know if I could help but I will try.

She had been diagnosed with RSD about seven or eight. A reported she had fallen her for her knee. And that is what set it off. She had severe bilateral foot pain. And worse on the left side. So, the problem she could no longer go to school. Mostly in a wheelchair meaning her mom had to stay home to take care of her. So, the dynamics in the family for everybody, was what was happening. They had a child that was miserable, depressed, gaining weight, cannot go to school. There were no answers. Mom couldn't work. Grandparents will like, what do we help or how do we do this? These pain problems are a family affair. You help one person in the family, you help the whole family. When the mom brought her in, she was in a wheelchair. I was told she probably will be in a wheelchair. The mom told me that she had been down at the Children's Hospital in Gainesville. They gave the diagnosis of juvenile rheumatoid arthritis. She was put on chemotherapy agents. We talked about that methotrexate earlier. Mom was concerned about the drugs. When I started to dig deeper, I found out all labs negative you can be zero negative I was highly suspicious. I'm like, wait a minute, this is a kid do we want to do this with this child? I started doing my examination with her. I was fully prepared for RSD. No sign of it. The foot hurt, the left was really bad, but there was no sign of Orest D. and so when I did my neurological exam, basically reflexes were normal. There was some areas of sensation that were hyper. Which matters to me. It is not just numbness but subtle changes between the left and the right. And her motor strength within normal limits. The mystery is in the history. I want the whole story from the child from the time she was born. It turns out there was not just one full, but she had three serious falls where she hit her head. And one where she lost consciousness. And that she collided with another child at a daycare center. And when she did that, she was not tampered also having seizures. She took her immediately to a fire department rescue, they had her checked. They said to get her into the doctor. They said don't worry she will grow out of it. She had also fallen off a five foot wall and broke her arm. She was on her bike because she broke her arm, what you think everyone was paying attention to? The broken arm. This is starting to make sense to me. The kid has head and neck injuries. And so, I want to know what the doctors had said about this. She had seen pediatricians. Nobody had ever asked about the history. In their defense, all of us were put into these 50 minutes to get this. You are looking at the presenting problem. This is where it this is getting us into trouble ending up with persistent pain. I wanted a cervical MRI. [ Indiscernible ] again, ongoing persistent pain, no explanation. Labs negative and a history of

multiple trauma. We set it up and I treated the child. I got her on the table. I ran day standard concussion protocol. I ran this cervical trauma Phibro, basically inflammation of the spinal cord. She immediately started getting relaxed and sleepy. We started to see that response when it happens. So, 45 minutes into the treatment I checked her feet. They did not her. And I think she was surprised, she relaxed even more. I let her sleep and I talked to the mom about what I was thinking. When I sat up at the treatment, she jumped off the table. Clearly her brain had process that she felt better, and no longer in pain. She stood up on her feet, absolutely no pain at all. She took her wheelchair and she wielded out of the clinic. And she walked all the way to the car. So, the imaging came back after. It was actually pretty good, slight loss of her seeker which I was able to restore. I only had to treat her tumor times. I asked the mom to get with the doctors about the medication. Her mom decided to take her off the medication. The pediatrician never asked what happened. So, it was within two or three weeks that she was back in school. She immediately started to lose weight. She was able to continue to get involved with activities, although eased very slowly into her. There have been restrictions. She never really had very much pain again. Maybe one or two flareups. And able to go back to Sparks. Remember her grandfather was the one who asked about it. So, the grandparents bought a precision homecare unit that had the protocols that she needed. And so, she had that in case she ever needed it. They were using it at home also. And she emailed me 8 years later to let me know that she had stayed pain-free that entire time. She had graduated with honors from my magnet school. And a college scholarship. She was going to get to do her dream job, and I think that was in graphics. Her mom got to go back to work. Everybody got their lives back. This is where AJ, I have had a four year follow-up with him. He continues to do Microcurrent. He has use of the right shoulder now. And then we have someone actually now into 2014. 2015 -- now here we are, another 5 years. So, 13 years she has been doing great. So these are examples of what we can do with Microcurrent. And now we are going to take a brain break.

You can do water in and water out if you need. Please move around, stretching go outside and get sunshine. Step away from your computers and your devices. Get some natural sunlight.

We will come back in 15 minutes. And then Mark asked, do these other devices have these protocols? Yes. Almost all devices will have these. All devices have these. They come preloaded with 50 protocols that I put together for practitioners. And precision care. You can get these protocols, some of them as well. But most. Definitely the spinal cord and the standard concussion one for the nerve. It is easy to get these customs loaded. Loaded with 160 particles for everything she could possibly need in her clinic. Again, I use all of these devices in my practice. I have all of the stories that we are talking about. Any other questions before we go on break?

It is 3:13. We will have everyone back at 3:30 if that is okay. Does that work for everybody? When you come back, we are going to start with a video that is about 28 minutes long. It is an interview. From the Nellis Air Force Base on the research they are doing. That is what we will start with when we come back. [ Captioner standing by]

Okay, Troy tells me that we are ready to start. I am going to share an interview that I did recently with Dr. David Moss. So, David graduated in 2009 from the uniformed services University. He was on active duty in the Air Force for a decade, and seven of those years at Nellis. Family medicine residency.

And I met him in 2018, when we were doing the demonstration study. It was the research study, bringing into these biogenic devices. Over the course of 3 1/2 months, and sometimes I went twice a month. I would visit for an entire week, teaching on Mondays and Tuesdays. And in the clinic with Dr. David Moss. In 2019, after Dr. David Moss transitioned into a civilian role of the family medicine residency. And along with retired Colonel Dr. Paul Crawford, the actually started the Nellis integrative medicine clinic. Since that time, I have been back there to be in the clinic with them to teach again. We also recently did a virtual. I am going to switch this over, so you can hear. We will start the interview.

Troy, if you will stay in contact with me, in case we have any issues with this. >> [ video being played ] thank you. I am happy to talk about what we have been doing at the Nellis Air Force Base, specific with the last year with integrative medicine clinic. It is an idea that was passed mostly by Dr. Crawford. And along for the ride. It has been fantastic.

Shannon and her team came out in 2018. They presented to us a lot of these modalities that we use now. To make a long story short, we messed around with them for one year, trying them on different patients. And then decided it seem like a worthwhile effort. Even Dr. Crawford retired last summer, asked if I would join him in exploring modalities further. Together we decided that we would create the integrative medicine clinic.

We started to open our doors in August of last year. It is the only integrative medicine clinic in the ACC. And primarily funded by research grants. We have four research assistants that are on those grounds got two of them week consider clinical research assistance, they do actual patient care. Along with the research, as well as to that are primarily administrative research assistance, doing re-creating, keeping track of the data that we produce from the clinic. And those are part-time funded by grants. [ Indiscernible] we can retrospectively look at the data that we get from patients on a day to day basis. The things that we have unable to do this last year, Shannon went to the Scott Air Force Base where we introduce them to these modalities. They fall under what is called the [ Indiscernible ]. We are a regional one and we can collaborate with those sites on research. Many of our [ Indiscernible ] have been recruited from malice, Scott and [ Indiscernible ]. Last month we successfully had a three day virtual training. [ Indiscernible ] looking at us through the screen. We were the eyes, ears and hands to train several residents, faculty and a couple of physicians outside of our clinic. And microcurrent and myofascial.

What is the difference between when you do the retrospective, basically is that anyone that walks through the clinic door that has pain? And being treated, and everyone is filling out the same research information,

regardless. [ Indiscernible ] either in a controlled group or specific research.

We are recruiting out of our clinic. [ Indiscernible - low volume ] when we get a referral we send them to [ Indiscernible - low volume ] if they are interested in being a part of the study. If they are, they get excluded for one reason or another. Or if they want to complete the microcurrent research protocol, we keep track of the data from the patient. [Indiscernible ] we have a ways to go with that. The general clinic data about one year's worth of data. We do not have specific plans right now for when we want to publish. Probably publish it on a regular basis. That is the plan. [ Indiscernible ]

It has been great to use these modalities, I have trained in acupuncture for the last X years. -- 6 years. Now we can hone in on the patient side of approach. Focusing on quality of life. Our interest is and to improve the quality of life. [ Indiscernible ] if we can improve the quality of life, that is good enough for us. By focusing on not just this physical -- but to also look at psychosocial issues, psychoemotional problems, and mental health. We have made a big difference for a lot of patients, helping them to realize how their pain, and how their emotions are connected. And how we can make the connection for them. And unlock some of those emotions got to be able to be treating pain more effectively. It has been fantastic.

Since the data is being collected on everyone that comes to the clinic, it office some opportunity to look at the numbers are, and the level of satisfaction by having all of that being addressed. How brilliant. Getting ahead of things would become. Do you maybe see the potential that the integrative medicine clinic can actually become a model clinic for showing practitioners how to help with patients while being efficient, and getting good outcomes and great outcomes, and having the patient's happy? Can you speak to that a little bit?

One of our major goals having the clinic, is to figure out ways to make modalities usable and 20 minute appointments. We realize the nature of primary care is shorts of appointments. And probably will not change that. If we can figure out ways to help physicians, and practitioners use these things effectively in short performance, we can make a huge different for patients. In terms of integrative clinic set up, and other treatment facilities, think it would be fantastic the feasibility of that across the Department of Defense remains to be seen. But we help people can see what we are doing. And to some extent, we see ourselves as a [Indiscernible] for patients to become too complex to take care of though short appointment. Brett they can be effectively treated in the short appointments. We spend a lot of time helping residents and faculty to figure out ways to do that.

If you can get something to mitigate, can prevent it from being a chronic problem. Outstanding. These are the modalities you are using in the integrative medicine clinic. Do you want to speak to these? A lot of people are joining us for the workshop. They probably know quite a bit about acupuncture and probably even doing it. You have been doing acupuncture for a long time.

Yes. I was trained back in 2015. We have been very fortunate to have a unique set up in our residency. A large number of our physicians are trained in acupuncture. So that is definitely one of the things that we use in our clinic. I would say the majority of acupuncture used in our clinic now focuses less on pain, more on the emotional components of pain. However, we still use of the pain as well. I love acupuncture, I think it is fantastic. Another one is frequently specific microcurrent. Probably the foundation of what we do in the clinic. I am sure we will talk about this at length. I will keep it brief. Basically, we can target specific tissues and problems with specific frequencies when we treat patients. There is data out there and we want to contribute to the data. Clinically, it feels like it works. And I agree with being diagnostics about the treatment. So that is the main goal. We -- it is hard to deny, patients are on and they feel better.

You have it right in front of you. And a lot of the patients that you see, are they are in control. And every other modality with injections, physical therapy, rehab, they have done you name it.

I agree. I am a simple family guy. But when I look at these things, it is evidence-based medicine and we always have to keep that's at the forefront of what we do. Sometimes we do not have great evidence, it just does not exist. For me, if I can give specific treatments for a specific problem, then I can [ Indiscernible ] and to me that is good evidence. And continue to do those treatments. That is what we see with acupuncture. Long intensity laser therapy, called laser. A lot of things that you can get. The two things that we have seen the best results are with it works good with arthritis. Wound healing. And when we combine with acupuncture, for certain musculoskeletal problems and seems to work well. That is what we primarily use that for.

You are going to be specifically doing just any kind of studies on laser, do you have numbers to do that? We have pilots that we are doing. We actually have things set up and ready to go in the month of October to get that started. The next one, I will leave that one for the last. The functional myofascial therapy. Again, I'm sure we can talk about this. More in depth, a huge part of what we do, being able to help patients use the correct muscles, it has been practiced changing for me to understand that some people have structural problems. If I can get there muscles working correctly, we can alleviate a lot of pain and help them to good functional movement, using the correct stabilizer muscle. We do this a lot in our clinic. It has been great. This is one of the things that the residents have latched onto. We see residents walking down the hallway, holding onto patients with doing these techniques all the time. It is fun to say.

Just for the viewers, as you know from what I talked about the beginning, I spent thousands and thousands of hours as a practitioner and a myofascial pain specialist. And they needed a fast, functional way to address athletes, dancers. It worked well in the military. I just came up with the technique as a new stabilizer. One of the things that I would ask, [ Indiscernible ] manual therapy because they did not get hands-on

experience. As a physician, do you feel like this was actually easy to learn, and the grand scheme of things?

I do.

Yes, it is very simple, conceptually to understand what is going on. And basically, if you have a very basic understanding of anatomy, you can do this. Basically, you hold onto the muscles that have trigger points, or chronically and spasm, you do the movement. The patient is doing the movement. After a few seconds to one minute, the brain tells the muscle to relax. And so, in combination with helping them to turn on stabilizer muscles that have not been working properly, when we do that, we can get foreground results. We have a lot of D.O. in the program. It is actually -- they focus on bones and joints, this focuses on muscles and myofascial. So, the D.O. -- they put bones and joints in the right place and the muscles will fall. This is the opposite, putting the muscles in the right is got the bones and joints will fall. Several of the D.O.'s switch where they think about it. Which is the way I think about it. If I can get the muscles to do the right thing, the bones and joints will likely follow. Smack and then we have the microcurrent addressing the central nervous system.

How amazing and wonderful that you have all of these modalities available to your patients that come through the door. [ Indiscernible ] basically the 240 patients. Show me the data.

As you can see, this is our first 242 patients, this is the data available when I sent the slides to you. You can see the first column, the follow-up. First visit up to the follow-up. We have patients with low within eight visits, [ Indiscernible ] if you look to the far right, on average patients come to a pain level of 4. You can see that on most visits, at least 60 to 75% increase in pain at that visit. In the first two columns, what you see is basically the some of the pain score. The first visit was 250 patients, if you add up the pain score for each, that will give you a total number. The reason I think this is important, you can see the number is really big. Upfront and then it gets smaller and smaller. I think that speaks to the fact that we do not have patients coming back for follow-up visits. They are getting better. And they do not need to come back and see us. Of course, we have patients that we see all the way up to the seven or eight visit. But the majority of the patients we can get what we need to get them between four and six visits. So they [ Indiscernible ] . We tell them to call us if they need us. And a lot of the patients do not call us because they are doing really well.

That is fantastic and I have been in the clinic working with all of you. I have seen the patients that have come in, and with complex cases ending up in a integrative clinic. This is not just that I hurt my shoulder hip or low back pain, these patients are have been in chronic pain for a long time. This is actually [ Indiscernible ] to bring down the numbers. And really seeing that you really do not have as many patients when you started with that 243. So, you have a lot of people graduating. It is not your typical physical therapy, or in a modality for three months. So, kudos to you for what you have been able to do. And you also using the Dallas pain questionnaire, which really helps with function.

I would like to ask one thing. I agree wholeheartedly that most of our patients have had back surgery, neck surgery, extremities surgery. They have been told they need those surgeries. They have seen pain management. They spend physical therapy, they have done it all. Many of them come to us very skeptical. I have been to every type of doctor. Nobody has helped me that much. So, we are a last ditch effort for a lot of patients. It is very rewarding to get [ Indiscernible ].

The other thing that we do with our patients, we use the Dallas pain questionnaire. If you look on the left, the question grouping addresses different parts of quality-of-life, questions one through seven assess activities of daily living, the next with anxiety/depression. The numbers [Indiscernible] on the quality of life. For example, if the number is 45%, then you are saying that my life is 45% worse than somebody who has no problems in this particular area.

So, what we have seen on these questions is, we get a downward trend for sure. On these numbers. They were not is quite big as we anticipated. When you get back up to seven and eight beyond. Those numbers actually [Indiscernible]. Which to me probably speaks to the level of complexity of some of the patients that we see 48, nine, 10, someone so forth. [Inaudible-Static] Like everybody else we had to shut down during COVID. A lot of patients were saying life got worse because of COVID, can we come back and see you?

Things are clearly trending down which is really nice to see. This tells the big story right here.

Correct. When we looked at these numbers, for the pain questionnaire we were expecting a difference although we did see a decrease, is this clinically relevant? Does it mean the patients are getting better or are they just numbers that may be deceiving? We had our research assistance call all the patients we have seen and they asked one question. As a direct result of being seen in the integrated medicine clinic would you say your life is worse, the same, a little better or a lot better? This graph shows about 75% of patients reported their quality of life was better. As you can see with the green and yellow being better. That was great to see that this difference those were seen and clinically relevant.

That they just needed that coming down a little bit. Do you see in your clinic when patients come back, from what I have seen as a practitioner [ Inaudible-Static ] and they are a musician and they still have pain in their finger or they can't play an instrument and it is like I still have this problem. After you have this pain diagram and [ Inaudible-Static ] apart where the brain has reset were in need disruptive painted all I'm going to report it to you even though there is change in the pain and what their function is and maybe that is where this quality-of-life comes in.

We see that fairly consistently. On the first visit we will drastically reduce their pain. We really get patients down to one or zero and when they come back their pain has come back to some degree and sometimes

patients because they have gotten used to little to no pain, they say it is back to what it was but objectively when we work on them they are not as tender. Their range of motion is better. The other interesting thing we see is their whole demeanor is so different. We had patients come in and they are typical flat aspect and not that interactive when you talk to them. The fact we ask them as many questions as we do often helps them come out of their shell a little bit. [Inaudible-Static] some patients don't recognize it and we have to tell them, do you notice you smile more?

My life was different from that one visit. [ Indiscernible ] best doctor's appointment she has sat in her life. It is great to hear things like that.

When that happens it also speaks to all the places where we can do so much better as a healthcare community to give this whole person care to our patients. It is outstanding what you have been able to do along with Dr. Crawford and the entire team. I wonder if you could just speak to the opioid crisis? Clearly when we started this demonstration in 2018 our goal [ Inaudible-Static] in a non- pharmacological and address the opioid crisis. What you see directly around opioid usage?

I would say first off for several years that her acupuncture practice has grown in the clinic. We documented decreased opioid use just one acupuncture alone before we adopted some of these other modalities. We see the same trends. We see patients use fewer opioids. The patients who come to our clinic oftentimes are pretty motivated. Patients who don't have any interest in opioids frequently say they don't want to come to our clinic. There is a bit of self-selection but we have seen patients that come off narcotics or have come off on their own and we were able to help them to be a lot more comfortable. These modalities I have no doubt in my mind this treatment will be a huge asset in fighting the opioid crisis.

We were looking to people maybe looking in the closets and see what types of equipment might be there that you don't know about was certainly within your clinics figured out how you can start implementing some of what Dr. Maas and Dr. Crawford have been able to implement at Nellis Air Force Base. Dr. Maas compared to 2018, I refer to you as having your dream job now without everything is set up. Did you ever think it would be like this? Did you ever dreamed this is what you would be doing as a physician?

Not ever. That is part of the military and when you get introduced to things it makes it a great experience, but I never thought I would be doing this, but I love it.

Dr. Maas, thank you so much for your time at the end of a very busy day and we are so glad you could join us to be part of the pain scales and I'm sure everybody in our audience is appreciative of you joining us and sharing your data. Thank you for your time and have a great rest of the day.

I appreciate it. Is everyone able to hear me?

Great.  Any questions on that interview Dr. Maas was willing to share with us? Mark asked which devices did they mainly use their? Nellis is using met technology which is the devices I showed you. Dr. Maas also [Indiscernible] uses that device and uses it for scar tissue and the vagus nerve treatment. They are also using leg -- laser and the [Indiscernible] we ended up breezing over but they started implementing that.  Patients with chronic pain where the brain cannot stop the I in pain signals, even though the tissue has been improved or it is not making sense. The device does scramble and reset.  With long-standing peripheral neuropathy and long-standing chronic pain issues were nothing has moved the needle, and also people that seem like they have central pain we have got frequencies for that, they have been able to use the Kalmar with really good results. They are using laser and acupuncture.

I am curious if you can comment on the return to duty outcomes from use of microcurrent and other integrative therapies?  Dan, what I can tell you is I had and it total from when I was there in 2018 and side-by-side basically doing preceptorship and when I was out in February of this year, we did see some very complicated patients in the fighter pilots and we did see some of those people go back to work. One of particular was a TJ that had a multilevel spinal fusion and I was able to work with him following that and he was cleared to go back to jump but for him that was his life. We don't have hard data and I know they have got another entire year of being able to collect data at Nellis and hopefully we are going to be up to pull that out. They are using the [Indiscernible] Pro device.

Since some patients will have to continue this out-of-pocket at home, which devices recommended for home use? That is the mend wellness device able to be programmed by a practitioner and I will tell you those are services I am available peer-to-peer to get these. We have some pre-set up protocols with full online training for patients that choose to get these devices. There really are a lot of patient second benefit from having these devices at home. They don't necessarily need to come into the clinic if we know they have got a long-standing spinal thing perpetuating that pain. They can rent it every single day and get back to their life and that is what we tend to see. Mark asked, how much does the home device cost? Practitioners are able to get those devices for about $1400 and usually when they go to the patients, they are usually 1800 or 1900. There is on the GSA a package where those devices are already programmed for the patients with all the top things we saw at Nellis but people would be able to get that special pricing through the GSA package pricing from Mend.

Any other questions on that? Okay.  In the time we have left we are going to get to this last bit. There is one more question coming in. I a medical massage therapist at Womack working at the intrepid spirit and I am interested in adding microcurrent. Do I need a certification? Yes. When there is an online class, as some point I'm hoping to get out for some of the hands-on training. There are other practitioners you may be able to have teach you and how you do the setups as well as after you do online training. Intrepid is one of the places microcurrent was in there earlier and I think a lot of the devices disappeared from the bow calls and the storage units. Previously they had use and different

practitioners using it for the past decade. My emailers on here, and I also posted it in the chat. Anybody that wants to email me directly please know you are welcome and anybody that had difficulty with downloading the relieving pain handout, I'm happy to send that by E-mail also.

Now we are going to talk about nerves. We did the beginning part and Dr. Maas would tell you they don't even make it past the first protocols because those are the ones that tend to help so much.

In family practice with all the interest in the residence they are able to address some of those like I pulled this money -- muscle in their able to be treated in the clinic. The thing about FSN and nerve pain is first you have to evaluate the neurological problem. My training got drilled into me for old-fashioned medicine despite imaging coming out and everything else. And old-fashioned evaluation where I'm getting the neurological exam, this is helpful because you can document what you are seeing with the reflexes, sensation and muscle strength and how that changes doing your different interventions. This is a graph to remind you, when I'm thinking about muscle pain and joint pain, I'm thinking the nerve root so my brain is mapped to go upstream and I'm thinking about which nerve root could be involved and which segment of the spine and what else. This is to remind you when you see people come in with different pain don't necessarily think about the location, think about the nerve root that supplies it. Anything bilateral, immediately start thinking about the spinal cord.

These are great pictures, even though they said trigger point, they have got nothing to do with the wiring and the neurology, these muscles innovated by specific nerve roots go in that pattern. Just think about the gluteus medius having an L5 pattern and the gluteus men a mess going down the back of the make -- leg and the soul is causing heel pain. There is several pictures where there is an overlap in my opinion.

If the muscle gets irritated is this irritating the nerve going in and then to the cord so of course there is neurological involvement. We are trading at names for numbers. When we think of the nerve roots and peripheral nerves it is 396 but the sacral plexus we are thinking F1 NF two, this is the sciatica, if we are having issues there is a special frequency which is 78 for the sacral plexus and can address the nervous system which is 45. We are going to treat from the spine to the end of the nerve root. Positive leads to the spine and negative leads to the end of the nerve root. We typically see neural pain will decrease anywhere from five to 20 minutes but sometimes it can take up to 40 minutes, so we have shorter and longer protocols depending on what we need to do. Anyone complaining of hamstring pain, this is where I think about the sacral nerve plexus. Remember if we are doing our conductive strip inside a paper towel or using sticky pads, this is where you adjust from the back of the neck to the end of the nerve root. If you come around under the armpit you are not only touching the nerve roots but also T-1 and T2. If we were addressing the thoracic spine this is where we would do is set up that is either a T shape where you have it from the back of the neck entreating to the end of the nerve roots all the way in the front or the conductive material wrapped in towels all the way down

the thoracic spine  and another talent front. We put people in treatment rooms. You can put them in recliners. Some of these treatments take a while and this is where you have a procedure room that is available for a while and have [ Indiscernible ] whoever is the assistant checking in on this folks.  Nerve pain, when we think about the lumbar spine, if we are dealing with pain going into the quadriceps and the knees, and then four, five and S1 you can wrap it around the bottom of the feet to catch both sides. If it is in one side you wrap the foot or the leg that is the one with the nerve pain. Here is all of these different modalities. They are actually combining these different therapies and coming up with treatments where we have got straightforward problems they can take care of in 20 minutes. If you are using multiple devices this is how we get two hours of treatment done in 20-30 minutes. With the example of the long protocols that have to do with the central nervous system in the beginning and the spinal cord where it can take a couple hours, park them in a room and after that you can get these treatments done pretty quickly.

If the coming in with myofascial pain or back pain now we want to think upstream. What is going on with the ligaments and people coming in with backache. Backache is a description of pain and not a diagnosis. Because we haven't had good ways to treat this except for acupuncture, it is like can I symptomatically help this person? It is hard to help the myofascial pain if it is perpetuated by discs. This is a schematic drawing in the lumbar spine. [ Pause ].  I can't at the arrow. If you look at the schematic where the pink is in the middle, the gray is where the [Indiscernible] can leak out. You don't have to have a herniated disc. All you need is something bulging and if it is communicating with the circulatory system of that area and all of those vessels or the nerves this is where we get the chemical irritations and will  cause irritation which will cause  the muscle to splint.  This is where you end up with cranky muscles and you treat them and comes back. That is because there is something extreme driving it.

Remember how important [Indiscernible] is, I encourage all of you to learn how to read your imaging. Is a class I would love to do going through everything on imaging and what we can look at what the spine. Radiologists don’t have the advantage of having the patient in front of them, they are only reporting on what is there sometimes they report everything where you can create a picture in your head and sometimes, they tell you unremarkable and there is not more information. You can't come up with an image. People who have these problems developed trigger points and want the area to stop the movement. I call this my poor man's evaluation because I work with therapist and practitioners that just can say go get imaging because they can't get it authorized.  The reality is, if you go into flexion and rotation and add vibration and it hurts and then when they go to neutral or extension it is better than it is a disk. This is what the imaging pictures will look like when someone has discogenic pain caused by a tear. This was read as pristine where the red arrow is, and you can see the white.  The white dot tells you, you have [Indiscernible] and this was part forward by Charlie April and this was in the early 90s, the early years of MRI and he noticed everybody that had low back pain had this white dot that kept up showing up. The picture on the left, this is a lady that was crippled with mechanical low back

pain and she was on heavy duty opioids and in a wheelchair and couldn't work in the story line was you're too young to have surgery which was crazy because she wasn't too young to have her life wrought with narcotics and being on disability. She ended up having surgery and did well and this is someone that genetically high levels of [Indiscernible] and high levels of inflammation. The segment got stabilized and she went back to her life. We have patients ended up doing triathlons and half marathons in all their activities when surgery is done well. This is integrative medicine where we bring the best of the best. The right patient with the right procedure and the right timing.

Getting people out of pain quick is important. We talked about discs and joints have their own referral pattern and it is the opposite of disc. The poor man's evaluation for people who can't get imaging is if you go into an extension and rotate to the painful side and it really hurts and pops you back into forward flexion and rotate to the opposite side, this is where we have got set generated pain. These are easy ways we can watch someone. People walk in, they are telling you what is wrong by the way they appear. These are the referral patterns the interventional radiologist mapped out in the 80s and 90s and these are reproducible, and these also mimic some of the pain patterns we oversee. When you overlay this you can see it is this whole pattern of the spinal cord and the nerve root, the disc and the myofascial pain pattern, it is we have only been able to treat where the soreness is we have looked at some of these upstream structures that are responsible for the pain. There are patients that come in with head and neck pain and mimic the myofascial pain patterns. When you have your patience that come in and holding their thumb finger in the eye and have a terrible headache, that is the [Indiscernible] joined in have their head tilted away. You patients are walking in and how they are holding their body is telling you what is going on. There are simple setups with the elect codes and devices. You got positive leads in the back and negative to the front and sandwiching the tissue. Electricity takes the path of least resistance so when you do treatments in smaller areas you have to make sure the electrodes don't touch each other. You can use sticky pads to do the treatments. This is why we have all these muscle problems with the joints and the pain generators because the pain is saying when that person moves that joint it really hurts. There is information so the brain says to get the muscles to clampdown so basically the brain is using the muscle to splint the area to try to stop the pain.

If you are a manual therapist and do myofascial trigger point therapy, early on we were taught to treat the trigger points and stretch the muscles out. It is better if it is not being perpetuated by a neural problem being caused by a disk problem so now that we have a way to treat it we can think upstream. These muscles are having to make these decisions about how you going to get through your to do list and how you going to do your activities. This myofascial system is receiving input, sending input and working with the brain and mapping from the motor sensory cortex. If you can't feel it you can't find it which is why Dr. Maas was talking about how many people are not able to use their stabilizer muscles properly. People don't even know it because they adapt and move on. The brain thinks in terms of who is doing the job and not doing it. These muscles just adapt so you can get on with it. The other

thing it is adapting to is in the of the upstream structures causing pain. In the beginning I told you 62 muscle is also artery and this is someone it had a fasciotomy after a rattlesnake bite. This is why we think of it as artery and muscle and that is because the muscle is incredibly vascularized. The fascia is highly susceptible to getting adhesions and scar tissue. Most of us were trained in the early years, you do the surgery and the scar is only where you had the incision or removed an organ or something happened inside the body. We know these scars can proliferate and grow throughout the body they basically go out with little tentacles. We want to think the scarring may not be just where you see it on the surface but going much further throughout the body. Again, acupuncture helps with this. In the beginning I told you it is important when you start running microcurrent you have to delineate if it is acute or chronic and that is because the chronic protocols will have these frequencies for calcium deposits and fibrosis, and there are powerful frequencies and it will interfere with wound hearing and new injuries and how the tissue fits back together so we always want to make sure we are being mindful. I'm going to bring in a little bit more about the transfers up Dominus. I showed you this picture before. At Nellis Air Force Base when I was training, I realized most of these people going through physical fitness were having problems with their stabilizers. Most of these people could not immediately activate a muscle and stabilize whether it was lower traps or transverse a Dominus. This transfers up Dominus is important to all of you. It was not talked about that much in the books and of course we all have our belief in our minds are mapped based on what we were taught, whatever happened if we didn't learn it, maybe it's not important.

We didn't know a lot about the transfers up Dominus and it wasn't in the book everybody overlooked it. All the muscles in the stabilizers were not look at. If this muscle is not stabilizing people typically end up with chronic back pain and may be the missing piece for folks who have chronic back pain. It is not uncommon to have the split between the two wrecked I muscles in the front. Pretty common for women. We see a transient after childbirth but after multiple pregnancies, women can end up with permanent diet stasis and then they don't have the integrity in the middle to stabilize the pelvis through the rib cage and end up with low back pain. The bodybuilder the bottom, that hole in the middle where his bellybutton is all the way up, this is someone who has done way too many setups. I talk about it all the time, sit ups are not a good indicator for physical fitness and not good for the back so you can enter up with diet stasis if you are Amand -- a man. The faster needs anything that is collagen building to repair tissue. Check everybody [Indiscernible] have them bring their head and shoulders up and if the fingers sink in and it is more than two fingers, you're looking at someone who has lost the integrity and maybe over functioning. We have an entire protocol that mitts this back together and transfers of Dominus exercises to activate it.

We are just always going to start at the brain. It doesn't matter what the issue is and we go into the central nervous system which includes the spinal cord and the per referral system. Would look at the spine and the skeleton and the myofascial complex. If you have a joint problem, we treat the myofascial system first because the muscles control the joint.

That was the biggest change for the DOs and anybody who is joint focused. Muscles are innervated by the peripheral nervous system and the ones that contract in the joint. When we correct the myofascial system which is corrected by the peripheral nervous system we change joint function. Any questions on that? Then we will finish up with emotions and a little bit on adverse childhood experiences. Any questions? To be human is to have emotions. You heard Dr. Maas talk about the fact with this acupuncture he is addressing the emotions and probably one of the biggest pieces that came into the paradigm of looking at what is happened to people from early childhood on from a trauma standpoint because that information gets stored in the body. Our limbic system has been around for a long time and is designed to keep you safe. It is always working on your behalf. It is just we have signals that come in that give us accurate information and then her body responds. Dr. Maas is using internal and external dragons with acupuncture to help people process and release those old painful emotions. With microcurrent we have a frequency for a motion, so we are able to use the 970 and compare these with a tissue or the acupuncture in traditional Chinese medicine, all the organ systems and elements are associated with particular emotions so when repair those we are able to address those particular types of emotions. Here is an example of what we would do in microcurrent thinking about Chinese medicine and the frequency for the lungs, so we are dealing with grief and anguish it is seven and 17. If you people that ruminate a lot, they worry which is the stomach which is 32. Then there is a frequency pair of 970 and 33, we call this restored joy and that is where the heart and that brings back in love, joy and laughter as we think about the fire element and the heart.

I'm going to give you a case on someone where we are bringing together the pain and the emotions. This one was published, and I have long-term follow-up on that. This is a 39-year-old female at the time I saw her and she had been in chronic pain for about three years. Her chiropractor referred her to me. She knew about the Quincy specific microcurrent and with my experience with it and all the menu therapies, when I got the history from her she had gotten a motor vehicle accident and some falls. She got headaches and sore throats and bladder infections in really painful periods. She was married and her husband who is legally blind they had a very good relationship according to her and seemed to be medically healthy. She had only had an appendectomy. She was very proper and reserved and well-groomed but someone with the flat affect and a little pale. On that visit she was having mainly left leg pain. Then these abdominal complaints. Her pain usually stayed around a 7-8 and she could get down a little bit and that it would come back up. I was going to this history and I asked her about her gynecological history she got really upset and she told me her mom had been wanting her to see the gynecologist, but she couldn't do it. She started crying and I put my clipboard down and I realized there was much more to this story. What I did find out, I was asking you a lot of questions no one else had and being thorough then I found out she had been a victim of ritual abuse and trapped in a cult. I did not go into any details. I didn't want to be traumatized and I am of the believe reliving experiences and sometimes excessive talk therapy can make problems worse. When these things are coming up we know the neurology with the written them moving forward is a sign of safety for the brain and basically you limbic system.

I got the bare amount I needed to. I didn't even want to imagine just how bad it was and I didn't need to know in order to help her. Now I'm wondering this pain problem is probably PTSD because emotional pain can lead to physical pain so when we talk about things being them advertised, the patients are not making up the pain, it is emotional and being registered as pain in the body and it is there in the brain and being perceived that way. She had all the classic symptoms of how we would do a true PTSD diagnosis. She was under the care of a counselor was about two and half hours away and she specialized in ritual abuse and she said she was better than she used to be but basically was agoraphobic and terrified of bugs because of what they did and had a lot of OCD and always stayed covered up and lived in fear and she felt very ashamed and depressed. I did the standard concussion protocol because she was concussed on every single level and this is where I went into addressing the emotions and give her some support around her emotions and dealing with the spinal cord and the superhighway that is taking information. I was using one of my other devices and I was broadcasting frequencies for super stressed. I had her pain down to a two within an hour and she was more calm and relaxed and is sickly better. This person who never slept until the sun came up in the morning said they were getting a little better sleep and her pain decreased significantly for four days. She also had less anxiety and we continued on with the treatment. When it is working you stay on the same path. I added in a little bit of manual therapy and you can imagine I was incredibly careful because of the sexual abuse and the trauma so I maintained eye contact with her and had her stay completely in control. At the end of it, no pain.

In our last three appointments she came back in and she said she had been sleeping and her color was back and more engaged with facial expressions. She had these big social events. She had someone close to her that was getting married. She was in the wedding and the strapless bridesmaid dress which she was scared about but find doing that. She had hosted the parties in the bridal shower, and she was able to do this and be involved. On the last treatment she that may run a special protocol used for people in the military and a PTSD protocol.

We think about this is physiologically happening in the body. It is not psychological or emotional. It is physical. We continued on with the treatment and on the last visit she fell asleep in the treatment room which she said she had never slept anywhere in her entire life than at home in her own bed so that was a huge win. When she got up on the last treatment she felt good. She was even surprised. We had a one year follow-up with her after that and her pain level stayed at zero. Her sleep quality improved and she was Mabel -- able to manage intrusive thoughts and know she was safe. She lost a shame and felt good about herself. She was able to kill bugs and get rid of them. For her to do that I knew we had one on this one. She wrote me a very long letter and said I want you to tell the world about this. This is part of what she wrote in the letter. Most importantly I now feel like life is worth living. I know my life matters to me. I wake up happy to be alive. I get excited when I think about the rest of my life. I am so grateful for the opportunity to have a full life. I have joy, peace and hope in trying to embrace each moment with open arms. I know I am becoming the person I

want to be. The thing that was most fantastic for me last year is I got to work with Bob Kaufman who came up with the Kaufman Kok tail and we teamed up when we were doing warrior games and worked with the most complicated cases and between us we were able to do all this work and really help people with these ruminating thoughts and PTSD and change very quickly. This is where all of us need to think about the limbic system more in the limbic system hijacking [Indiscernible] all through our younger years when kids don't have the ability to make decisions for themselves and if you get exposed to extreme trauma, people have lived through things where they said they were scared to death. You have got these adults coming in that if you asked them they have had adverse childhood experiences contributing to this and maybe through their life they never felt safe. Things keep on happening, so they have heated exposures and this is the situation where the limbic system has a direct line with your eyes and auditory information coming in. Once you limbic system gets activated your prefrontal cortex goes off-line. You don't need to think you need to run away or fight would do what you need to do to protect yourself and this primes the brain in patients are seeing things from a negative light. You ask someone a neutral benign question and they are like, did I say something wrong? You are saying that because you were thinking I made this up and you didn't say anything, but they are primed. When you see your patients doing that it is the limbic system hijacking. This is why patients improve so much when we do acupuncture and calm down that system.

Remember the emotions in your patients and get the trauma history when you can overtime. You can go online and get the questionnaire, the original one with 10 questions. They had one for the military that has been team which is important because it includes traumatic things that can happen specifically to men and women in the military. We normally have that fighter flight that we can also go into the freeze response in this is basically the old lizard brain where I feign death and don't move the other creature can't see me moving and they won't know I'm there and I will get eaten. Your door so vagus nerve can actually cause you to go into that freeze response. These are some of our patients where they freeze this is where we can run emotional protocols and the standard concussion protocol. We have got procedures that work with the vagus nerve. We have got a lot of issues right now with people having to wear masks and we can't see facial expressions. With the physical distancing we have lost touch and communication, so we are probably going to be seeing a lot more of these issues and you probably already are.

This is going back with the whole story of the patient with trauma and emotions in looking at adverse childhood events. For those of you that don't know these doctors, they teamed up and did the CDC ACE study.

All of the stats are there in the information. The doctor did this research back in the 1980s and he was doing an obesity clinic and doing a great job of weight loss for people, but then they would put it back on. He had a 50% dropout rate, so he went past -- he got curious about it. He found out all of these people had suffered some kind of adverse childhood experience and trauma and food was away to self soothe and putting on weight was a way to protect themselves from being victimized or anyone being a perpetrator against them for sexual abuse. They enrolled 17,000

participants and they did 26,000 consecutive patients. This is Kaiser Permanente, this is middle-class and upper-middle-class, employed and insurance and these are your average people coming in. They did 10 questions from three categories to find out about abuse, neglect, violence, mental illness and incorporation -- incarceration. Only 36% of the people had zero. This is one of the things where I talk about zero and 10. Zero s are able to self-regulate and stay calm. They don't react, respond or get triggered. The people that are at 10 which is crazy the wrist as many people that had four or more, those people that have those really high scores because of the environment they ran as children they did not self-regulate because they were too busy trying not to do with the violence, the abuse or neglect or whatever it might be. This carries forward because of how your limbic system gets mapped. We go through these questionnaires in the ACE study and you can see people that emotional, physical and sexual abuse and if there were things going on in the household. Maybe they were watching a mother be abused. Maybe there is alcoholism or substance abuse. Someone is suffering from mental illness. Parents go through a separation or divorce or one of the parents was incarcerated. [ Background Noise ] and two income families. This was showing up quite often and reproduce once again and in this one only 38% showed up with a score of zero and this is when they did the behavioral risk back surveillance system in 23 states. This was published years ago. We actually know how to prevent people that are high risk for the top 10 basically chronic diseases including substance abuse, depression and suicide and not being able to have good relationships, getting diabetes and heart disease, we know there is a correlation with this and we know the higher you are in your scores the more associated you are with an early death because of these adverse childhood experiences. We can intervene with people much earlier and much more quickly and from the pain problem and people not being able to engage we have a way to address emotional traumas, PTSD, unregulated emotions and get people out of pain and people into groups and support groups functioning on how we improve your well-being and day-to-day function as opposed to telling their trauma story one more time which traumatizes. We can change the endings for some of these people. This is one of the reasons Dr. Maas was talking about the emotional work they are doing there go ahead and go online and pull out the questionnaire.

I would encourage all of you to start including this. All you need is the raw score. People don't need to tell you how they answered the questionnaire unless they want to tell you and then they can share it.

I hope you have enjoyed this presentation. You patients are allowed to have more than one thing wrong they usually do. Where they are feeling the pain is usually not where it is coming from. You have a way to think about the nervous system as perpetual waiters and if you can incorporate microcurrent therapy, this is a great way to start calming down the brain and the central nervous system as well. What I loved most about frequency specific microcurrent is I became a better dog because every time I couldn't figure something out, I was pushed to learn more. I know growth and incorporating new things can be uncomfortable. The older we get we just go back to what we know because it is easy so this can be challenging but I know now from the algorithms we have and what happened at Nellis Air Force Base these models are reproducible and can be

incorporated in the practice. I want to thank all of you for participating. I hope you're going to have more interest in joining the residence revolution that is up-and-coming in the 21st century. I do have an online class, and here's my contact information and my emailed. We did some of the questions earlier on but I'm going to open this up for questions for anybody that would like to type or if someone wants to ask me something, that would be great, and thank you for being such a great audience.

This is [ Indiscernible ] from Walter Reed. We have the [Indiscernible ]. I was wondering if you can do any of the PTSD treatments with Cal mar and what that looks like and if we could get a copy of that? I was thinking maybe we could do it with that and maybe we can do it [Indiscernible] I'm just curious if you could do one of the emotional treatments?

I don't know if the Cal mayor works that specifically and works as a scrambler and strong signals into the body to scramble everything. If you get trained and the folks in Texas may have the training videos up now, they are in Dallas Texas, there is a way you can go in and stimulate the vagus nerve. Because it is a higher voltage you can stimulate the nerve and you can get a contract relax and it was start calming down and calming the nervous system and the brain so we have absolutely seen that work and people use the [ Indiscernible ] with that as well. The frequencies are very specific for these emotional protocols and PTSD and brain structures and how things communicate. You may have some microcurrent devices there you don't know about.

I don't think so but I will look.

My great hope is what is happened with this other basis is to get to these other facilities and be able to do some more stuff with Bob Kaufman and some other folks and bring these technologies and everywhere so everyone has access.

Thanks.

Thank you so much. Any other questions?

I just want to share we at the pain clinic at Walter Reed have been combining FSM with acupuncture the last two or three years and I have to say it does work so much better together because the microcurrent you can address the emotional part. With acupuncture you can address the pain. Those seem to provide longer-lasting up acts
Anyone else? [ Background Noise ]

I think you can get incredible results because you can do the function with the treatment.

At Nellis it was the occupational therapist assistant for -- that was the shining star. She grabbed a hold of this and had a great result for herself and in the physical therapy and the rehab clinic getting outstanding results. It didn't take long for her to be a very long waiting list and of course the integrative medicine clinic snagged her up

so she went back to school to be a licensed massage therapist and delete therapist in the clinic now.

At the Cleveland clinic they use microcurrent in rehab. [ Indiscernible-Multiple Speakers ]. That is the main treatment they use is microcurrent for pediatric rehab because kids won't tolerate acupuncture needles.

And they are fast responders. Basically, in Norfolk in that whole area the entire Children's Hospital, all five of the hospitals at all of the pediatric psychotherapists take a day off I believe it was last year and I was able to come in and do a one day custom training for 20 physical therapist [Indiscernible] part of it in all the hospitals. Kids do great with it.  I treat infants and babies also.

Okay, we are five minutes after. Thank you for being here. Thank you for your comments and sharing and anyone wants to reach out by email please feel free and again I want to thank the organizers and Troy were being so helpful and on the spot to help with everything to make this go so smoothly and I hope all of you have a great rest of the week at the Pain Care Skills Conference.

Thank you very much.

[ Event Concluded ]