Why Orthodontists Should Be Treating People And Not Teeth

Speaker: William Hang, DDS, MSD

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Dr. Scott: Hello and welcome, everyone. I'm Dr. Scott Saunders of Healthy Mouth Media. Today it is my pleasure and privilege to have Dr. Bill Hang with me.

Dr. Hang is the founder of Face Focused® Orthodontics headquartered in Agoura Hills, California. His Face Focused® approach focuses on an advanced school of orthodontics which focuses on bringing the jaws forward, never backward, and focusing on having the facial structures aligned, and integrating that with pleasing aesthetics. Dr. Hang's goal is to educate as many parents, patients, and professionals as possible about the benefits of Face Focused® Orthodontics.

Today we're going to be drilling into a specific aspect of that, which Bill has termed extraction, retraction, regret syndrome, or ERRS. That is a very convenient mnemonic to focus on, something that we really like to avoid and something that we would really like to change around to; in fact, do the opposite of what a lot of orthodontics is doing today. Bill and I are going to discuss that. We've got a couple of points that we want to drill into specific to that and maybe some related topics, as well. It is a great pleasure to have Dr. William Hang with us today.

Welcome, Bill.

Dr. Bill Hang: Scott, I'm really happy to be part of what you're doing here and help in any way I can.

Dr. Scott: You have gotten, I think, a pretty decent response on your website and your seminars that you've been teaching worldwide about what you term extraction, retraction, regret syndrome, or ERRS. How did you become

aware of this? Well, first of all, can you define that for our clinician as well as consumer audiences? Tell us how you came to be aware of this.

Dr. Bill Hang: Absolutely. I began reopening previous orthodontic extraction spaces for people, actually, 30 years ago this very year. It started with a woman who presented with a significant headache pattern. She'd had teeth taken out, and I didn't know if the spaces could be opened or not. I'd never seen that it had been done, but I thought it surely made sense to try to do so. I promised her absolutely nothing, and used some techniques that I thought might work, and was very happy that they did. I was able to successfully reopen her spaces. Her headache pattern went away and has remained gone since that time. Since then I actually have been doing it for literally dozens, and dozens, and dozens of people. I actually did it in my own mouth shortly after I did it for her. Reopened the space where I'd had one tooth taken out.

What really happened along the way as having these people from... I've had them from more than half the states in the US and several foreign countries. I would listen to the patients all the time. I would never solicit their comments about what was going on for them. They almost always would come to me with these comments of what was going on and what happened for them, how things improved with their appearance, their breathing pattern, their pain pattern that went away, their balance got better. I have literally dozens of things that I've learned from people just by me being quiet and listening to them tell me. Several years ago I was trying to put all this together, because it was such a significant part of my practice. It dawned on me that we really were dealing with this syndrome, a legitimate syndrome.

I define ERRS as a constellation of aesthetic, functional, and emotional signs and symptoms brought on by orthodontic retraction, all of which are preventable, because retraction itself is preventable. It doesn't even have to involve extraction. It could involve any form of retraction, which we use in orthodontics--headgear wear or even what we call Class 2 elastics. I want everyone to understand that not every patient who undergoes these kinds of treatments is going to have a problem. I don't mean that at all.

Having said that, it happens for a significant number of people. I've had people from all continents of the world contact me, and they're looking for people who know how to reverse this. I listened to them, and I learned from them. Every case is different. I also know that it is a preventable syndrome. I've trademarked those two terms, ERRS and The Preventable Syndrome, because it doesn't have to happen.

Orthodontists are not doing something in a mean way, but what they're being taught to do is retraction. You're dealing with a tongue which has got four cranial nerves enervating it. Although we're taught that, "Oh, the tongue will adapt", well, that's not the case many times. The tongue does not adapt. The tongue doesn't just get out of the way. It has to go somewhere, and it goes to the back of the throat, and oftentimes with negative consequences for the airway. I've written some articles on this,

and I get comments from people all over the world. I've had people even send me an inch and a half-thick notebook entitled "My Extraction, Retraction, Regret Syndrome Story." I know it has resonated with people.

Dr. Scott: That is amazing. It's striking that you bring out that you purposely avoid trying to elicit comments. People come to you with these complaints because their body is telling them that something is wrong. Is that right?

Dr. Bill Hang: That's exactly right. They articulate it better than anyone ever could. I was taking lots of the TMJ courses back in the 1980s, and I was learning what was going on. Someone said to me in one of the courses--I forget who it was--"We as doctors need to take the white coat off and sit down, and shut up, and listen to our patients. They'll tell us what's wrong, and we just have to be bright enough to figure out what they're saying."

Indeed, I believe that passionately, that the patients really understand what's going on. They say so. Who could know their body better than the patient? We just have to be bright enough to understand just what the patient is saying, and more than that, what does that mean? Are there things that can be done to help those people? The answer is, most of the time, one way or the other, they can all be helped with one approach or another. Almost all of them would be able to be helped.

Dr. Scott: That is really a patient-specific approach rather than a one size fits all. We do see some of the one size fits all approach in orthodontics, do we not?

Dr. Bill Hang: Absolutely. Orthodontists are taught in a certain... It's really focused on the teeth. There are even books. You see newsletters that come out that have a title of an article in there that says, "How would you treat this malocclusion"? Well, when it's titled that way, indeed, that's what someone's doing. They're treating a malocclusion as if this set of teeth was separate from the body and somehow not even a part of the body. I was taught to treat malocclusions. I quit treating malocclusions many years ago and started treating people. The more questions I began to ask the patient, the more I realized that very few of them were free of symptoms.

The more you learned about their pain patterns that they even presented with and their sleeping patterns... Many of them have very poor sleep, particularly women who may not even have a sleep apnea diagnosis, for instance. They'll take a sleep test, and the sleep doc will say, "Oh, well, you're okay. You don't have sleep apnea."

In reality, they have upper airway resistance syndrome [UARS], which means they don't get scored high into the sleep apnea category, but they still are not sleeping well. They have fragmented sleep, and they don't wake well rested. Lots of people have this. Many of them have a fibromyalgia diagnosis, and many of them have pain patterns. They wake not well rested. They have just a whole group of symptoms like this.

Many of them start with aesthetic concerns that something.... I listen to what they say. I never put words into their mouths. They come in and they

say, "Gee, my lips sunk back;" "My face is caved in;" "My face got longer;" "I look like an old lady," and all these kinds of complaints from more than one person. I've gotten these people from all the continents of the world, literally, except Antarctica. Not anyone from there, but all the others.

Dr. Scott: Give it time. [laughing]

Dr. Bill Hang: Give it time. [laughing]

Dr. Scott: Okay. We've touched on sleep. We've touched on facial appearance as perceived by the patient. In order to give our consumer audiences and our consumer parent audiences a little bit more to focus on for individuals, besides sleep disturbances, besides appearance, what are some of the more specific complaints, symptoms, and concerns that people come to you with that turn out to be related to ERRS?

Dr. Bill Hang: Many of them will have clicking jaw joints. What happens is that the disc and the tempomandibular joint will become displaced as retraction occurs. There's the concept that we call mandibular entrapment. I have a schematic that I can show people how that actually happens [insert slide?], where the upper teeth have retracted back, and it forces the lower jaw back, and causes the discs and the joints to displace.

People will get a clicking and popping sound there. Sometimes that goes on. They'll get where they can't even open. We call that a closed lock, and it'll progress down the road with those kinds of symptoms. Many of them will awaken with pain in the face, and around the jaw joint, and massenter temporalis muscles. Frequently they will have forward head posture. They do this just to maintain their airway, because as they keep their head forward, it opens their airway. For that their cervical muscles will often pay a dear price. The sternocleidomastoids, and scalenes, and then the trapezius muscles, those muscles that keep our head upright, many of those are very tender. It can affect the entire body. People can have low back pain associated with it. Many of the patients, when we reopen their spaces for them, they'll come up with what I call the "Oh, by the way, Dr. Hang" comment.

"Oh, by the way, I told you I didn't have a symptom pattern, but I used to get three or four sinus infections a year, and now I don't get any." "Gee, I told you I didn't have a pain pattern, but the pain in my neck that I've had for all these years and thought it was related to working at a computer, it's gone now that you reopened my spaces." "Gee, Dr. Hang, I used to fall off the treadmill, but now my balance is better." I've had patients who have had numbness in their hands and feet, and that has gone away as we've reopened their spaces. I think this really relates to someone having an autonomic nervous system imbalance between the sympathetic and parasympathetic nervous system. They're in sympathetic overload, and they're in a fight or flight mechanism vs. being in parasympathetic rest and digest.

Anything related to that can be a big issue. I continue to be amazed at

what I learn when I listen to the patients. The hard part about it is that they have these aesthetic concerns, and they have the functional concerns. Over the years many of them have spent in excess... I've seen many people spend more than $100,000 before they even see me, and have no resolution. That's when it really gets into the whole emotional thing. When you've had pain pattern going on like this for many years and you've got no resolution, then... Many people say, "I cry myself to sleep at night, because I can't find a solution for this problem."

People are literally ready to end their lives. I'm not suggesting that all of the people that have retraction have this happen, but you must understand that a significant portion of them do have this, and it can cause the body to really almost shut down completely. I could tell many very bad stories of specific patients, but it can be anything from just a little bit of a discomfort pattern to something which is really very limiting to them.

Dr. Scott: What you're describing could, in fact, be a life-threatening condition.

Dr. Bill Hang: Without question. When someone gets a pain pattern that they really can't get away from, it completely affects their whole life and their whole body. That's not okay.

Dr. Scott: Yeah, that really puts things in perspective, doesn't it?

Dr. Bill Hang: Yeah.

Dr. Scott: There are some people who are actually ready to end their lives because of what the Extraction, Retraction, Regret Syndrome has done to them. Now, let's get to the meat of what you can do, what you have been doing, for these people. How do you help them resolve these complaints, these symptoms, and their concerns and just get their bodies back on the road to recovery?

Dr. Bill Hang: Okay. First of all, most of them contact me on the Internet. I send them an email that says not all patients will respond just to merely reopening the space. They send me a gallery of pictures and the narrative of what's going on for them. I can then see if I think they responded too conservatively. When I say conservatively, meaning nonsurgically, merely reopening the spaces... I will often have them get a sleep test if I suspect that they have sleep apnea, and I will want them to get a CPAP machine if they are diagnosed with sleep apnea. They come to me, and I will work with an ENT specialist who will get the sleep test done for them. If they need it, they can get the CPAP machine.

The point here is that we want to look at everything. We want a very thorough history. We take cone beam x-rays [CBCT] to see what's going on with the jaw joints. We look critically at their face and say, "Can this person benefit from reopening the spaces?" If so, then we outline the treatment. The treatment itself usually involves use of some removable appliances, which I design. Within five months if they wear them and activate them correctly, we will have these spaces open. We will have the

teeth moved apart. The crowns of the teeth will be pushed apart, and there will be a seven- to eight-millimeter space for a bicuspid tooth or a missing lateral incisor in cases where a lateral incisor space has been closed. We then put patients in braces. We put them on in a certain way that will tend to move the roots apart so that we can get implants in in the long run.

We align the teeth and go through a series of wires. Later on as we broaden the arches out, we even expand laterally both arches to create even more tongue space. Our goal is to give the patient the maximum amount of tongue space and have them be able to have what we call proper rest oral posture, meaning having the tongue to the palate, lips together, and be breathing through their nose 100% of the time. Now, most of these patients had teeth taken out, because they had low rest tongue posture, and that caused crowding. The orthodontist was taught that they had to take out the teeth. We want to reverse that. In the process we want them to learn to keep their lips together, and to have their tongue to the palate, and become nasal breathers. As part of this, we often have been taping their lips at night.

I tape my lips at night myself and have been for eight years. It keeps me from getting a cold. People come back all the time and tell me how much better they sleep when they're doing this. The goal is to try to get them to have a better immune system and get their tongue where it ought to be so they can function and get their life back. There's lots of different variations on that. Sometimes people have had just upper bicuspids taken out. Those are what we call Class 2 cases. Some of the time in those cases we'll actually open spaces in the upper, but we'll also open spaces in the lower where no teeth are missing. We will create space there, again, by moving the lower teeth forward. As we move the upper teeth forward and make separate teeth appear to protrude, we bring the lower teeth forward, and that reduces that. It camouflages that. It also gives the patient more tongue space.

The really crazy thing is sometimes people come in... We've moved their teeth very minutely, and they'll come in and say, "Gee, my, my husband says," or my wife says, "I don't snore anymore." I say, "Gee, we barely moved your teeth." They still say, "I don't snore." The point is sometimes a very small increment would be just enough to get that person over the edge.

Dr. Scott: It doesn't take much of a difference. Now, I'd like to back up for a minute, Bill, and focus on, well, first of all this. You're describing a very thorough diagnostic approach that you take with every patient. One thing that you mentioned that sticks in my mind--you talk about a cone beam computed tomography, or a CBCT image--you get that routinely on every patient that you work up.

Dr. Bill Hang: Always. I want to look at the airway. I want to look at the size of the airway. I want to see where it's small, realizing that the size of the airway is not diagnostic of sleep apnea.

Dr. Scott: Right.

Dr. Bill Hang: I also want to emphasize that whether or not you have sleep apnea or someone has sleep apnea is not the be-all and the end-all. Snoring alone is correlated with plaque formation in the carotid arteries. That was out as a report from Henry Ford Hospital six years ago in January. That even made it on Yahoo. We look at all that. We also look at the jaw joints themselves. With the cone beam we can get a tomogram of the joints, so we know what's happening with the joints. Sometimes the patient has degenerative joint disease, and that's an issue. Unless that's resolved, their pain pattern may not be resolved.

Dr. Scott: Could you give a basic explanation for our consumer audiences as far as what a cone beam computed tomogram is? Some may be familiar with it, some may not be. I know from my experience--this is even dentists who practice sleep medicine--some do not believe in the true diagnostic ability of a cone beam because of something that you mentioned. It's not going to be diagnostic of sleep apnea. The data that the cone beam scan is going to provide, are they beneficial in most, if not all, cases that you work up?

Dr. Bill Hang: I really need to have it. I want to have a good idea of what's going on. I realize the way the head is positioned in the machine can vary from what their airway is going to be. It's an upright x-ray, and we're dealing with people who sleep. We're not taking the x-ray when they're sleeping, obviously; when they're laying down. I realize that it's an artificial construct. Having said that, if you were able to choose an airway, I'd always pick the biggest one, because given the same facts here, the airway can collapse because of poor muscle tonicity. The older we get, the more that happens. The bigger the airway is, the less the chances it's going to become a problem and cause the airway to occlude and/or just be hard for the patient to breathe. Cone beam x-ray is a super cool tool.

It's a CAT scan, and it's a 3-D x-ray. It takes slices through your head, and you can see where the smallest area is. For instance, is the smallest area behind the soft palate? If that is the case, then the likelihood I was opening up extraction spaces for someone, and being successful, and getting rid of sleep apnea for somebody is very much reduced. What we can affect with the reopening spaces is that the tongue can come up, and out, and forward out of the throat. If the smallest part of the airway that is likely occluding it is in the base of the tongue, we may be able to be helpful, but if the soft palate is the offending place where it's the smallest, that's probably a case where someone's going to require surgery to advance the maxilla itself, because that brings the soft palate forward.

All of this is taken into account. A number of these cases will require surgery. People will often say, "Well, orthognathic surgery is radical." My response is, "I don't think it's any more radical than wanting to live another day to go fishing with your grandkids." People will undergo bypass surgery routinely. If you tell them, "Well, you got a 90% blockage in the arteries of your heart," they'll sign up for the next day.

Dr. Scott: Yeah.

Dr. Bill Hang: 'Cause everyone does it, but the fact of the matter is we do surgery cases on some of these patients. We've seen literally within days their blood pressure's gone from something like 163 over 120 to 128 over 78 within days after surgery when their airway is improved. They also report that they're dreaming. They haven't dreamed in years, and now they're getting into REM sleep; they're getting dreaming. You'll learn all of this as you do it, but the focus is always on the tongue space, and the airway, and doing whatever you can to optimize that.

Dr. Scott: Right. The cone beam, it's amazing. My philosophy is you don't know until you look. An approach that I have seen is that we decide up-front that the cone beam is not going to give us any useful information; therefore, we have no good reason to do it, which in the cases of some--it pains me to say this--is a convenient way for saying, "I really don't want to spend the money to put a cone beam in my office."

Dr. Bill Hang: Exactly.

Dr. Scott: It's individual, but I think that is the motivation. I can tell you in my own case--this is after I had a mandibular advancement appliance made, a TAP appliance, and I was in that for probably over a year--that I finally did get a cone beam done. Lo and behold, the doctor who took it said, "It's your soft palate."

What jumped out on the image was I have a huge soft palate. That is one of the things that's obstructing my airway and feeding into my severe obstructive sleep apnea. I wished that I'd had the cone beam scan done earlier rather than later. I have useful information at the very least that I wouldn't have had, had I not had the CBCT done. Thorough workup for everybody that comes in with this extensive narrative, very often expensive narrative, having to do with Extraction, Retraction, Regret Syndrome.

You've mentioned some people come in with inch-thick binders that they've got records of. The key to understanding what the patient is going through is simply to listen to what these patients' bodies have been telling you. We just talked about the cone beam CT X-ray. How frequently is the CBCT used in orthodontics? Do most orthodontists use this or not?

Dr. Bill Hang: It's interesting. I was at a meeting recently, and I heard a number. I don't know if it's accurate or not, but about 15% have it. I was one of the first. I'm on my second cone beam X-ray, I was one of the first adopters of the first one. I knew I had to have it. Yes, it was an expensive machine, but how can you not have the best if you're going to be trying to give the best treatment? I couldn't go back. It's like the coolest toy ever, and I'm a boy. I'm an old boy, but boys like toys, and it is the coolest toy ever. You begin to see things that you've never even imagined before. You can be so much more helpful to people when you have this information.

Dr. Scott: Yeah.

Dr. Bill Hang: I can't imagine practicing without it. To me, it should be the standard of care for everybody.

Dr. Scott: Yeah. I couldn't agree more. Is there a solution for everyone who has had retractive orthodontic treatment? I know you do your best to help everybody who comes in.

Dr. Bill Hang: Let me make it really clear. Something I say to every patient and have from the very first patient that I ever decided to reopen extraction spaces for, I hold up my hand like this and tell them I'm an Eagle Scout. "I promise to do my best". That's the only promise you're going to get from me. I don't promise to eliminate or reduce even one symptom for a person. If you want to go through the treatment with me, that's fine. Having said that, deep inside, based on my experience, I'm not going to start somebody unless I have a really good chance based on my experience that I'm going to literally knock it out of the park like in baseball, and I'm going to help this person a lot. Based on my experience, I know when I'm going to have that chance and when I'm not.

Now, there are two groups of people, those where we can conservatively help them and those who have been retracted so early, their faces are down in back; and their airways are compromised from the soft palate all the way down; and their chin doesn't exist; and they have long faces; and their teeth overlap very minimally. These patients require orthognathic surgery. Those patients do have a solution, but a surgical solution. I've been involved with surgical cases for soon to be 47 years, my entire orthodontic career. I've had many surgical cases. I've had probably 15 just since Labor Day. Almost all of them are sleep apnea patients, and many of them have had teeth taken out. These are the ones that are the worst ones and usually the ones where they have the least amount of hope, and they've almost lost hope.

One woman for instance, said to me, "My family would be better off without me," because she had spent so much time, and energy, and money, more than anything, seeking a solution. With surgery, if you add the fact that we can advance the jaws surgically, and if we do certain things to prepare somebody for that, the idea is expanding and reopening spaces. Sometimes we want to reopen spaces for people prior to surgery. Other times we do not. That's all part of the diagnostic process using the cone beam x-ray. We have solutions for almost everybody. I've not seen someone that couldn't be helped. The problem here is when it gets into surgery, it's a matter of who's going to pay for it. I's not inexpensive. Every case needs to be prepared properly with orthodontics, and I have protocols that I use for that.

Dr. Scott: Now, orthognathic surgery is surgery actually to move the upper and/or lower jaws. That's a major surgical procedure. It involves separating bone from bone, and it's a major undertaking.

Dr. Bill Hang: It is, and very few surgeons really understand it right to do it well and understand. For most of them it's about, "Gee, we want to make the teeth fit." For instance, they're going to talk about fixing a Class 3 malocclusion, and they'll want to set the mandible back. Well, you never want to set the mandible back, pretty much, even in Class 3 cases where apparently the lower jaw is forward. In reality, it's usually too far back; both jaws are too far back. The surgeon needs to understand that, the orthodontist needs to understand that, and most people don't understand that. They focus their energy merely on making the teeth fit. Well, I expect the surgeon to make the teeth fit, but what I want is for him to optimize the facial balance, optimize the airway, and in virtually every case that involves bringing both jaws forward.

I'll share with you, for instance, a little story about a seminar that I put on two weeks ago. Within the first few minutes of that seminar, I put up a picture of Jay Leno. Everybody knows who Jay Leno is. I put a ballot out there for everyone. "Please vote on how much Jay Leno's lower jaw needs to be set back. Circle two, four, six, or eight millimeters." We took the ballots at the end of the second day. I then essentially showed treating Jay Leno. I have a patient... I have a profile of Jay Leno and relative to the norm that I use. His lower jaw is actually about two millimeters too far back. I have a patient whose profile is virtually identical to that. I showed treatment of this gentleman. We moved his upper jaw forward nine and a half millimeters.

We expanded his upper jaw 17 millimeters. We actually did what we call a counterclockwise rotation, and advanced his mandible about seven millimeters, and removed some of his chin so that he wouldn't appear too full in the face. When the surgeon finished and sent me the picture, the very first thing I thought of was, "Oh, my gosh, this guy could be on the cover of GQ magazine now, because he looks so good." The big payoff was he immediately got rid of his sleep apnea. When he talked to me, for instance, he said the very first thing that would happen... "All these years of sleeping, I'd go to sleep, and within one hour I'd wake up, and my body would be in a complete, total sweat. Now I go to sleep, and I'm not sweating, and my wife says I'm not even snoring."

The point here is that if you have a surgeon, they need to understand what the goal is and what they're trying to do. For people who will see this video, and go out on the Internet, and look up about orthognathic surgery, they're going to see that there are a lot of bad stories, and it has a pretty poor reputation. That reputation is, unfortunately, well-deserved. There are a lot of problems, because people are not focused the way they should be on the airway, on TMJ health, and optimizing facial balance. It's still lost in that, "Gee, I'm fixing a malocclusion" mentality, which is where we need to get away from. That's educating the profession.

Dr. Scott: Right. It sounds like from the cases you're describing and the whole Jay Leno comparison that the outward appearance sometimes can be misleading, and the solution can be counter-intuitive. Is that right?

Dr. Bill Hang: Absolutely. Everyone on planet Earth would look at Jay Leno and say, "Oh my gosh, his lower jaw is strong. It's too far forward." When you really understand what you're looking for, and you look at the nose, and the cheeks, and the forehead, and you understand that the forehead is sloped back, it's tipped back to keep the chin forward, it's that way so that he can keep the chin forward and still breathe. Very few people understand that the forehead should actually be vertical. It should be straight up and down, but you'll see people routinely who have their forehead tipped back 20, 30. I've seen foreheads that are literally at a 45 degree angle to a vertical. Those people, they look like they're at Cape Canaveral watching a space shot go up, but they're really just looking straight ahead.

That's the only way they can really breathe, because it keeps their chin forward. Just looking at someone, people will often think that the chin is too far forward, but it hardly ever is. That's so hard for the dental profession to understand, because they've been taught the angle classification of what we call Class 1, 2, and 3. Deep inside everyone thinks that the Class 3 is, "Oh gosh, the lower jaw is going too far forward. We need to set it back." I was one of those people. That's what I was taught.

Dr. Scott: Sometimes that's as far as the diagnostic reasoning process goes, unfortunately. You mentioned that there were a lot of horror stories out there, and that's fed into those stories. About how many people would you say suffer from ERRS? Do you have any clear idea of a demographic? How would the US differ from...?

Dr. Bill Hang: I'm sure it's higher in North America where this has been done for so much longer. Literally, there are millions of people. How many? I have no idea. I get people from Katmandu, Nepal; from Cambodia; from Thailand; from Korea; all over. I have people from Kenya, Brazil, you name it. I had no idea that there'd be orthodontists in some of these countries. I haven't traveled to them. So I don't know. I have people who've had this treatment done. Some of my other patients who I've helped will find people on the Internet and say, "Well, gee, you need to see Bill Hang. He can help you." Then I get an email exchange and 20 or 30 emails trying to help somebody in Asia find someone who can do this.

Two weeks ago at my seminar in Las Vegas where I'm trying to teach other people to do this, I had a woman, a dentist, come from Malaysia, and she came because of a patient who contacted me. I said, "Find an orthodontist who you want to have learn this, and maybe I can teach that person to help you." Indeed, this woman got someone from Malaysia to come. In the interim, about 10 days before the seminar, I got another patient from Malaysia contacting me. It blows me away. For everyone who contacts me, I have to believe there are so many that have no way of knowing that there is a solution. That's the unfortunate part.

Dr. Scott: Yeah. There are people in remote parts of the world, if they're lucky enough to have an orthodontist who is plugged into looking at what you're doing. Some of these people--sounds awfully simplistic--may never have heard of a place called California. It may be that basic, a disconnect. It's

wonderful that you're bringing all these parts of the world together with this as a common denominator. The orthodontic profession itself, Bill. Is the orthodontic profession aware of ERRS?

Dr. Bill Hang: I suspect there are some that are, but it's a very touchy subject. I went through a very difficult time in my life when I got away from removing teeth. I had an incredible guilt feeling. This was about 37 years ago when I decided I simply couldn't take out teeth anymore. I have patients in my practice who had teeth taken out. I didn't know the first thing about airway or even anything. I just knew that I didn't like the way the faces looked. The more I learned, the more I realized the airway and sleep was a big issue, the more important it got to me. It's pretty easy to just shut it out and say it's not related. It gets to be also a very interesting political thing. It's very touchy to even discuss it.

I have to be very careful when I do that, because, I have my own feelings about it. I'm happy to help people, but at the end of the day, I'm responsible for the patient. I'm their advocate. That's, the Eagle Scout in me doing the right thing all the time no matter who's listening or who's looking. I believe that we as professionals owe them that. I think we need to take a very long and hard look at this and realize... Interestingly, Scott, in 1981 there was an article in the refereed [peer-reviewed] literature by one of the best known people in the profession that stated that upper teeth in Class 2 patients... For the lay people, that's someone who has "buck teeth" and everyone says, "Oh gee, your upper teeth stick out."

In reality, this article said, that's a rarity, that if they're not perfectly positioned, they're more likely to be too far back than too far forward. The suggestion was made, the treatment to bring the lower jaw forward would be more appropriate than treatment to bring the teeth back. That being said, since 1981 we're still teaching orthodontists to use head gears to retard the forward growth of the upper jaw. To me it makes absolutely no sense. We talk about being evidence based in the profession, and we're not, as a matter of fact. If we're evidence based, we would take that evidence and then do something with it and say, "Well, wow, we'd better find out a way to develop the face forward if, indeed, the teeth don't stick out."

We can't just camouflage this. Something which is, in my opinion, very, very important. I read this in early January, the first week in January. The German government did an extensive research project to see about the long-term health benefits of routine orthodontic care, and they could find none. The German government literally has stopped paying for orthodontic care, and they're going to save literally billions of dollars in the process. I can't argue with that. If much of what's being done in orthodontics is retractive in nature, then it's not okay. Many patients are treated without any retraction, of course, and that's fine.

The point is if we say we're evidence based, and the evidence shows no long-term benefit, what are we really doing? I have quotes from orthodontic department heads which basically, essentially say the same

thing. There's really not a lot of science. I have specific quotes that I use out of the referred literature. There's really not science behind what we teach. It's a long discussion, and I can go into it with a bunch of slides to support what I'm saying. It's probably the best way to do that.

Dr. Scott: Sure. Now, given the impact of sleep, and airway, and obstructive sleep apnea, UARS, and some of the treatments available for this, it begs the question: how aware or how conversant is mainstream orthodontics with the impact of sleep and airway on cases that might be impacted by ERRS for people whose orthodontist might be contemplating extraction retraction approaches?

Dr. Bill Hang: The profession is beginning to wake up to that. You have one of the major orthodontic companies that is sponsoring seminars on airway for orthodontists. The problem here is they really don't understand the issue. I came upon this myself a year and a half ago. I was hearing one of the best names in sleep talk at a major meeting. He was talking about expanding, and expanding, and expanding as a way to treat sleep apnea. That's fine. There's nothing wrong with expansion. Expansion means lateral development like this. I was so frustrated, because even this guy, who I understand has more than 700 articles in the refereed literature, one of the best known names in sleep, doesn't understand what, really, the issue is. I was so frustrated. I was sitting in the back of the audience. I leaned over to one of my friends that I've known in this group for a long time, and I said, "You cannot expand your way out of an anterior/posterior problem."

The problem really is in the front to back plane of space. We're in this problem, because we as a species have our jaws down and back from where our ancestors did. There's plenty of evidence for that. I could cite all of that for you if you wish, but it's way beyond what I can do here. Both the upper and lower jaws are back from where they were in our ancestors, and they're back substantially. The knee-jerk reaction of our profession is, "Oh, we expand." I've been expanding forever. I treat airway. Yeah. Well, excuse me, that's not the way to be successful. If you're going to be successful, you must be on the anterior/posterior plane of space. As a matter of fact, in my presentation I just gave in Las Vegas, I have this whole section on you cannot expand your way out of an anterior/posterior problem.

I show people with massive expansion. I've even shown some of my own patients where I've expanded them massively as much as I could to try to get rid of their snoring and/or sleep apnea. I've been unsuccessful, because you have to deal with the anterior/posterior plane. You must get the maxilla forward. You must get the mandible forward. That's when the soft palate comes forward. That's when the tongue comes forward. That's when you score the points, and your airway opens, and you're free of the problem.

Dr. Scott: Do you find that this anterior/posterior--that is the front to back direction--expansion takes the pressure off the airway in people who have sleep breathing disorders, obstructive sleep apnea, UARS, who might be using a

CPAP device? Do you find that that will confer a permanent solution to the point where they don't need to use their CPAP anymore?

Dr. Bill Hang: I have patients who have gotten rid of their CPAP machine. They've had it for years. I'm very careful to use that word "permanent." It's a word that I avoid very much, because we don't want to promise people certain things.

Dr. Scott: Unwise choice of words on my part. Long-lasting.

Dr. Bill Hang: Yeah, exactly. We don't know. We're so much in our infancy in this whole thing. Absolutely, I have people who put the CPAP machine in the closet, and they never use it again. I've even had one gentleman who was three weeks short of 75 years of age when he did double jaw surgery to advance his upper and lower jaws. The year before he did this he had ridden his bicycle from Jacksonville, Florida to San Clemente, California. He was in good shape. Three weeks short of 75 he had both jaws moved forward. Within five weeks post-surgery--I'm not joking--he was on his bike doing more than 20 miles a day again and happily no longer using his CPAP machine.

It is possible, and we try to get sleep tests done to confirm that someone is free of it. The hardest part is to get someone to get the sleep test done, because it costs a couple thousand dollars. When someone feels great and/or their spouse says, gee, you're not snoring, then they're not about to spend the money to get a test to confirm what intuitively they seem to know. The point here is it's very hard to prove all of this stuff, because you can't get the people to spend the money.

Dr. Scott: CPAP. Let's make no mistake. It has saved a lot of lives. It is considered the gold standard for treating obstructive sleep apnea, but sometimes you are able to effect solutions that will mitigate patients having to use that.

Dr. Bill Hang: I'm a big fan of CPAP, but we have to be very, very careful about this. I want these patients to be on CPAP if they have a problem, if we're trying to find a solution and waiting for them to have something to get this solution. There's one study out there that I believe came out two years ago, if not three. I'm not sure. It was in August in the New England Journal of Medicine, from the University of Flinders, wherever that is, which indicated that a CPAP alone does not provide a statistical benefit in preventing heart attack and stroke, which are the two biggest nasty things that we worry about. That's interesting, because the sleep community, of course, wasn't very happy to see that. There are reasons why that probably exists. I don't want to be the person who says, "This is the truth," but people need to understand that this is in the literature, and we need better solutions. It's clearly the case.

Dr. Scott: Right.

Dr. Bill Hang: CPAP, for more than 50% of the population, is not going to work, because they're frankly not going to do it. They just can't.

Dr. Scott: Sure. All the time we're trying to be evidence based. Sometimes when the evidence comes out, we find that we just don't like the evidence [Bill Hang chuckling], because we're inured to what we know in our hearts to be true. It's like that wonderful quote from Mark Twain: "It's not what you don't know that will get you in trouble. It's what you know for sure that just ain't so."

Dr. Bill Hang: Exactly.

Dr. Scott: There's an awful lot of that reasoning going on in health care, and I find that frustrating, as well.

Dr. Bill Hang: Yeah.

Dr. Scott: There has been some shift in thinking in regard to the scope of assessing for airway problems. There was recently a meeting that the American Dental Association had. It seems that there has been some forward movement there in urging dentists who practice sleep medicine and otherwise to screen for airway problems. A big piece of this is to do so in kids. The subject may be for another discussion. Are we moving forward with that?

Dr. Bill Hang: I believe it's one of the biggest things that's happened in my entire career to see that happen. Let's be honest, the American Dental Association has not been a group that's been on the forefront of change for a lot of different things. For them to take this position, which is a very forward thinking position and call it... Say we mandate that dentists should be screening for this, not necessarily treating. If you at least screened for it... When you look at the numbers of people who have problems, it's crazy. We should be screening. Forty percent of the people over age 40 in this country snore; 60 to 80% of them supposedly will test positive for sleep apnea if they take a sleep test. We're talking tens of millions of people here, and they're in everybody's dental practice every day. They're just sitting there, and we don't ask the right questions.

That's the whole point is we need to be screening for that. Then if the dentist isn't trained to treat that themselves, they need to know someone who does. I view it as, really, an epidemic that needs to be addressed. It's that nobody really is addressing it. I've heard a statistic that 95% of the people who have sleep apnea are undiagnosed.

Dr. Scott: Right.

Dr. Bill Hang: Again, though, I cite the study from Henry Ford Hospital in Michigan several years ago. Snoring alone is correlated with plaque formation in the carotid artery. People laugh about snoring all the time and we make jokes about it, but we need to get dead serious about it, because it is literally dead serious.

Dr. Scott: Indeed, it is, and indeed, it is an epidemic. I couldn't agree with you more. I have to tell you that I've been to a couple of dentists here in my own

hometown area of Lancaster, Pennsylvania to get a feel of what the front lines, boots on the ground family dental, mainstream dental practice is like. I always ask them, "Do you screen for airway problems?" I come in. They know I'm a dentist. I say that I have OSA, and I have airway issues. What can we do to address them? I asked them, or I asked the hygienist sometimes, "Do you routinely screen for airway issues?" They usually say, "Well, no, we really don't." That's, why this mandate, I think, is such a good idea, and it's to my mind a very positive step forward.

Dr. Bill Hang: Oh, it's a huge step. I was thrilled. I went to the meeting in Chicago where this was announced. I wanted to be there when it came down and to see the presentations. I was very impressed by the whole thing happening. It was very gratifying.

Dr. Scott: Good. Yeah. For me, as well. Finally, Bill, if you could get out your crystal ball for a minute and give our audience members a look at where you think the orthodontic profession is headed. I know that there's been some headway in the organization of the profession and the American Association of Orthodontics and where we're headed with all of the sleep breathing disorders, the craniofacial malalignment, all the things that have bearing on extraction, retraction, regrets syndrome. What change is happening, and at what pace is it happening? Where are we going?

Dr. Bill Hang: The profession had a meeting on Marco Island, Florida in January regarding this very issue. They issued a position statement on it, which I was very disappointed in. I don't want to go into great detail about that, because I don't feel it's appropriate.

Dr. Scott: Sure.

Dr. Bill Hang: I believe that the young people in the profession need to understand that they need to take the ball and run with this. Many of them are coming out of school with a mountain load of debt, and they'll never be able to pay it back unless they can prosper in practicing orthodontics. My feeling is that they need to get out of the tooth straightening business, literally, to stop treating malocclusions, and start treating patients. I'll give you some facts and figures. I've had people come to me and say, even one of my patients most recently--he's a freshman in college-- he asked me, "Would you go into dentistry?"

He shadowed me last week. I said, "Yes, I would." He wanted to go into orthodontics. He said, "Would you go into orthodontics?" I said, "No, absolutely not, and here's the reason why. I see its days are numbered."

I'll give you some quotes. Mark Ackerman is a former orthodontic department head and very involved. His dad was an academic, too, and his grandfather was an orthodontist. He made a quote in a magazine called the Progressive Orthodontist. He stated a year and a half ago that within five years Smile Direct Club™ will treat more patients than all the orthodontists in the US combined. I have absolutely no reason to believe he is wrong. Smile Direct Club™ is 19% owned by Align Technology, which is Joe Hogan

from Silicon Valley. Align Technology, Invisalign, had over $1 billion in revenue according to Forbes magazine for the first time two years ago.

Forbes magazine rates Align Technology as the 31st most innovative company in the world. The point is Smile Direct Club™ is basically Invisalign from the UPS man. It's going to completely circumvent the need for a dentist or orthodontist to align teeth with aligners--aligners have taken over the market and will continue to--and the orthodontist cannot compete. It's impossible. Marketers will tell you, you can compete on two of three things: price, quality, and service. Smile Direct™--and there are other imitators, too--are going to beat you on all three. The point is if it's all about straightening teeth, it's all over. It's going to happen. I can't believe that it won't. I can't control the world. As someone who's been involved with this profession for 47 years almost, I see the handwriting on the wall. I actually view it as a wonderful opportunity. I haven't got an article published on this, but I have one written that I want to get published. Basically, this is a golden opportunity that is being handed to us, if we will just be smart enough to recognize it.

It's saying, "By the way, these people who have these teeth and these malocclusions actually have all these other things going on." When we get down to the kids who... Two to 3% of them have sleep apnea, the young kids. We realize that 15% of the population of kids is now diagnosed with ADHD. We know that there are many in the sleep arena, physicians, say that there's no such thing as ADHD. It's always a sleep and breathing problem. We've got 15% of our kids on Ritalin. Is that okay?

The point is we've got an epidemic here. We need to be recognizing that we've got an epidemic from the time that kids are born, literally, till the time that people die, and we're not recognizing it. The more of the questions you ask of those patients, the more you realize that person who has the crowded teeth or whatever, malocclusion, they also have a breathing problem, a sleep problem, and many of them have a pain problem. You didn't know that because you didn't ask the right questions.

What an opportunity for us as a profession to become mouth doctors - not tooth carpenters. That's what the dental profession has always been looked at as. As a matter of fact, in the ADA news earlier this year, there was an article there which I put in my lecture recently with three academic people talking about whether or not dentistry was really part of health care. I was astonished. You can go back and look at this article. Three people from academia, and they had eight or nine different points of, "Gee, we should be part of health care, and these are the points that we should be recognized in." They didn't even mention airway. I was so disappointed.

Dr. Scott: Oh, my goodness.

Dr. Bill Hang: But it made a great introduction to my seminar two weeks ago, but it's a crazy thing. The opportunity is there for those who see it. It's a golden opportunity. It should be viewed that way, but most won't, unfortunately.

Dr. Scott: That is the real caveat. It chagrins me to say this, but you're going to have a peak of people who use Smile Direct™ or something like it, because they are lured in by the sexy promise of straight teeth. They're going to have... Yeah, they might end up with straight teeth, but they're still going to have airway problems. They're still going have OSA. They're still going to have ADHD.

Even autism spectrum disorders have been linked to dental crowding itself. There was an article in 2017 in American Journal of Orthodontics and Dentofacial Orthopedics out of Canada. There's a statistically significant association between ASD and tooth crowding in kids 5 to 18. I'm afraid that there's going to have to be that hump that will have to be gotten over. The people who are taking advantage of the opportunity of which you speak are going to have to be undoing an awful lot of problems--kids with straight teeth but crooked heads, if I may be so stark.

Dr. Bill Hang: You're absolutely right.

Dr. Scott: If there's anything you want to add to finish up, now would be the time.

Dr. Bill Hang: I think we've covered it quite well. I want to emphasize that we're not promising anything, and we're not here intimating that anyone in the profession is doing anything for negative reasons at all.

Dr. Scott: No, of course not.

Dr. Bill Hang: They are well-meaning. I'm just saying that it's time for us to wake up and smell the coffee and realize that we are in a health care profession. We need to act that way, and we need to realize the connections that there are between the teeth and the body. Why did the teeth get that way in the first place, and what else is going on? For our own research purposes we're using autonomic testing on our patients. We have no data yet to really report, which is the balance between the sympathetic and parasympathetic nervous system and checking heart rate variability, which is recognized by the medical community.

Dr. Scott: Right.

Dr. Bill Hang: We need to have the whole profession come on board and understand that we need to jump in and be part of the medical community. No one can work alone. I have my team of people that I work with. I work with an ENT specialist who knows tons of stuff and we're into tongue tie, which is a massive issue which we need to discuss, a huge, huge, huge issue. I have a myofunctional therapist to help the patients learn to keep their lips together, become nasal breathers. I have an orthognathic surgeon who does this. I have restorative dentists who go in, and one guy who puts in implants for me. Great guy. I have to have this team of people. They're all my great friends, and I can count on them. We need for many professionals to put together teams like this to help people. We need to have teams like this in every city in the US. That's what we need. And North America, for that matter.

Dr. Scott: What you're calling for is for health care to be team based and the general restorative dentists and all the dental specialties are equal players on equal footing on that team. Unfortunately, we don't have that system right now. That's one of the reasons why we're interviewing experts, forward thinking experts such as yourself, who believe in this interdisciplinary model. You know you're not alone. The numbers are growing, and the size of the choir to which we are preaching is steadily growing. We appreciate your helping us contribute to that.

Dr. Bill Hang: I want to make one more statement here, because I like to be as reference-based as possible. There are articles in the refereed literature which indicate that the airway can be reduced with extraction and retraction. It's there; it's in the literature for people to look at. It's not me saying it. It's not me at all. I want everyone to understand that. I give those references. There's also articles which say it does not related, but you got to look at it all.

Dr. Scott: You've got to look at both sides, and that's what we at Healthy Mouth Media try to do. We try to present both sides and as much of an unbiased yet actionable approach as possible. We look forward to presenting those published references to our clinician and health consumer audience members.

Folks, We've been talking with Dr. Bill Hang, founder of Face Focused Orthodontics® located in Agoura Hills, California. We've been talking about his term, which is called Extraction, Retraction, Regret Syndrome which, unfortunately, is all too prevalent. People are having their faces pushed back rather than pulled forward. They're having permanent premolar teeth extracted and their faces retracted.

Bill's approach is the exact opposite to that. In a context of taking pressure off the airway, alleviating sleep breathing problems. Bill has people coming to him from all four corners of the world including Malaysia, Nepal, and all parts in-between, every part of the world except for Antarctica. I think in the coming years you may get one or two from there if you stay in business long enough. We certainly hope that you do. It's been a pleasure speaking with you, Bill. Bill Hang, thank you so much for being with us. It's been a pleasure speaking with you.

Dr. Bill Hang: Thank you very much, Scott.