Vcom: Easy Fix For Common CPAP Challenges Transcript

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Introduction and Speaker Background

Welcome back, everybody. I'm Doctor Wells, and I'm your host of the Sleep Deep Summit. New approaches in treating sleep apnea and insomnia. I'm really excited about our next speaker.

It's doctor William Noah. He is the founder and medical director of the Sleep Centers of Middle Tennessee. He is the founder and CEO of Sleep Rez, which is a company that manufactures the Com device, which is the subject of our conversation today.

And his, medical background includes pulmonary medicine in addition to sleep medicine. Welcome, doctor Noah. Thanks for having me, Audrey. Now, listen, I want to jump right in to this, device that you named the v com.

That's v o m, and it's causing a little bit of change in the way that sleep medicine doctors think about pap pressure. That's positive airway pressure.

Can you, give us some background on why you started questioning that dogma in our field and how you came to develop the v cam? Well. Thank you. Yes. So CPAp came out in the 80s, and about 30% of patients who went on CPAp in surveys back then complained of difficulty breathing out, exhaling, expiration when and because of that, the by level path, we're used to CPAp continuous or constant pressure.

And then by level PAP where there's two levels and inspiratory pressure and an excretory pressure. And really since the early 90s, most machines, have become where you have a higher is battery pressure and an exploratory pressure.

Now, in the 90s, you had to order what's called a bi level. But in the early 2000, CPAp machines then began to give higher inspiratory and lower expiratory.

Now, what's unique about all that is the literature in the 90s clearly shows that it's the exploratory pressure that's therapy. And when you drop expiratory pressure, you decrease therapy.

Rethinking PAP Pressure and the V-Com Concept

And we were giving higher inspiratory pressure top to compensate. But inspiratory pressure can open the airway. And so I think it's because so many lung specialists like myself came into the field when these machines did.

And we're used to ventilating people in an ICU where you have to have higher inspiratory than X battery. But when you're trying just to stabilize the airway from snoring and sleep apnea, you just need to stabilize it in the exploratory phase.

And, well, what I found out is that it's more comfortable to have lower inspiratory pressure. So yes, it's it's kind of hard to kind of tell the field.

It's kind of embarrassing for someone like me as a pulmonologist who's been treating people for 30 years this way, that in some ways we had it backwards.

You know, that makes so much sense to me. And I, I don't worry at all about, you know, the feeling of embarrassment because I think it's admirable that you went back and questioned the fundamentals.

And only by doing that can we have growth. So when a person is breathing that end expiration, when you sort of exhale your air passively, that is the period of time where the airway becomes vulnerable to collapse.

And that makes sense because what you're saying is the pressure from the PAP machine is supporting the airway at that point. Now, can you explain this device here?

This is your product the v. Com, and it's meant to fit in between the mask and the tubing. So it's a little, a little connector piece there. What's it doing?

Well, before I say that, let me add to your excellent explanation that, you know, you have to stabilize the airway after you finish exhaling. And actually, you have to do it a little bit earlier than that, but you have to stabilize it during exhale.

If you're on positive airway pressure, it's different if you're breathing spontaneously on room air but on positive airway pressure you have to stabilize it there.

And if you do, then you're not going to have any problem when you breathe in. The problem with the last, you know, 30 years. And our understanding is we're lowering exploratory pressure and destabilizing the airway.

And then we're giving all this positive pressure trying to compensate. Well, we're given higher pressures, and higher pressure is going to lead to a lot of problems.

The theory behind the V calm was I needed a way to lower inspiratory pressure. The machines on the market, none of them can lower inspiratory pressure below.

Exploratory. Everything's above. And so there was no way to test my theory and no one had ever tested it before. There's nothing in the literature. No one had purposely ever dropped the inventory pressure.

So I had to create a way to do it, and I took advantage. That sounds technical of the parabolic nature of turbulent flow. But but basically, when you have resister or resistance in a system, the more flow over it, the more the pressure drops.

And when there's no flow, there's no pressure drop. Okay. So breathing in, in a circuit, in a positive airway circuit on CPAp, there's all this flow going across the V calm.

There's the inspiratory flow your breath coming into your lungs. And there's exhaust flow coming out of the little holes in the mask. So all that flow creates pressure drop.

Now when you breathe out there's no flow going across. Well very little flow going across the v com. Because you're not the machine's not giving you air.

You're actually exhaling. So you're providing flow the other direction. And most of the flow going out of the little hose is from your exhaust getting rid of your CO2 and water vapor.

So with low flow there's no pressure drop. In other words, figured out a way to drop inspiratory pressure and maintain exploratory pressure without building a different new type machine.

Yeah. And so the V vacuum is released. We weren't real aggressive. And the pressure drop it's a couple centimeters depending on the higher the pressure you are, the more you'll drop because there's more flow across it.

The bigger you are, the more air you're going to breathe in, and the faster you're going to breathe that. I'm six foot four. My inspiratory flow rate is going to be higher than yours.

And so therefore, I'll have more pressure drop the than you likely would. And that's kind of how it works. And we did it at a level where it doesn't interfere with algorithms on the machine or the, the analysis of having events.

And we were just focused on a way really to introduce this whole concept into the, into the whole field because it's

so forward. If I had just released a machine first, I think there had been an attack at that machine.

You know, the the V column could work on any machine. We tested it on the current ones being sold here in the US, and it's not affecting their algorithms.

So it was a way to do that. Now, what we found was obviously it's more comfortable. That was really the key behind it that it's more comfortable. In fact people on high pressures can start with two V comes back to back, in there are even three for a night or two to help them get used and take one out and take another out.

Obviously when you put 2 or 3, you're going to drop expiratory pressure a little bit. So you've got to get down to one. But we found the comfort. Well then we also found that it reduce leak 88% of the patients.

It reduced leak it. And it was statistically significant to 0.0001. And of course, we found it reduce residual events.

How the V-Com Works in the PAP Circuit

In other words, the respiratory events you're having, we'll we'll go down according to what the data we collected, we also found that was I just was surprised that in people who were long term users and doing well on it, they had increased usage time.

And that was really surprising. These aren't new patients. These are patients who been on CPAp a long time and doing well. They had increased usage time.

Season CPAp users is what I like. Yeah yeah seasons. Yeah it's a great word. So I wasn't really expecting that. The thing I was wanting to find out was, in this, some of your listeners might think, well, I don't want to hear about this, but there's a problem we have in the field that when you treat people for obstructive sleep apnea with CPAp, some of them can develop central sleep.

Okay. And, I had a theory that that was caused by having the higher inspiratory pressure. And so I thought the V column would resolve that. And sure enough, in the trial, we're getting ready to release the paper now, 1700 consecutive, in lab studies.

It resolved every one of them. Wow. We had 18 occurrences of of of this central sleep apnea. And it got rid of everyone and made perfect sense. The other thing that my sleep techs figured out right off the bat is it it prevents mouth opening.

Now, not all, not all, but it it prevented about 70% of mouth openings. In other words, we're able to use 70% less chin straps. Other other other means like some use tape.

So yeah, there's there's a time to seal a new product on the market that looks very promising. And, so decreased Lee, decreased, mouth opening. We've had numerous reports, although no data of decreased swallowing air.

We've also had a lot of reports of decrease noise, but we've done no testing. But across the board, 98% are experiencing increased comfort. New patients starting it.

And that's really the bottom line is that's incredible. When when we're talking about CPAp, I mean, I, I just want to say that, you know, as you've probably experienced, right?

I know you've experienced the resistance that people have to CPAp just internally starting, something like this. I think that comfort is the number one obstacle.

And it may be the mask, it may be the pressure, but you're talking about a 98% improvement in patient reported comfort with the pressure when using a v com device.

Do I have that right? Well, what we found in our initial actually it was a, it was a, a DME up in that that number was

done in a large regional DME in the Midwest.

They were setting up new patients and, and 46 out of 47 was their initial data show that they preferred having the V. Com in there. So that's what that data is coming from.

It's certainly certainly over over 90. Yeah. You know, percent of new patients, and to be honest I think it would be higher. But I think sometimes people first go on CPAp, they take a big breath because they're anxious and then they can blow down and encounter the resistance of the V comp, where if you're breathing easily, like you're trying to fall asleep, you wouldn't do that.

So I think the experience is probably higher than that if you don't coach patients on how to breathe with it initially. But but yeah, I mean they perceive it now.

Is it is it going to fix it here. It's no it's not going to it's going to improve it. We already have some evidence that same DME at about a 12% increase in their adherence over three months, it's going to increase it.

But there's other things to adherence. You still got to put the machine on. You still got it. Still got to add water to it. You you got to carry it with you when you travel.

There's there's other things that people don't want to do with it. But if we can overcome this sort of pressure tolerance and make it, more accessible as far as the comfort part, I think that really I think that'll really help it.

It's kind of like when you give chemotherapy, you know, most everyone gets acetaminophen and some kind of, anti-nausea medicine. And are they all going to have fever or get nausea?

No, but you sort of give that. Just what why do you want them to have to suffer with a difficult therapy and sort of like starting CPAp could be considered difficult.

Obviously not saying realm is what I just said, but anything we can do to make it a little more comfortable, why not do it? As long as we're not interfering with therapy and and we're also decreasing adverse effects.

We have data for. Yeah. You know, there's there's a lot of points that I want to review. But before we go forward, I want to just highlight the fact that you've determined that using the V.

Com in the PAP circuit is not impeding the therapy that the patient is getting to correct their sleep apnea. The only the only way it could impede therapy is if the patient wasn't set correctly to begin with.

In other words, if they gave you too low of ipab and you had to have that higher ipab to help increase the flow over the obstruction that they caused, when they decrease your.

Oh, sorry, I said ipab, I mean expiratory pressure for your audience. But yes, if you've not been set adequately, then knocking the inspiratory pressure down a little bit, could cause you to have some of it if you're on auto path.

Okay. That is where it's self-adjusting, which I think most everybody has today is an auto CPAp. Yeah. Well then it really couldn't hurt because say it did drop your battery pressure a half a centimeter.

It would just correct it go right up for that. So, if you if you've been set on the right CPAp without an expiratory pressure release like C flex on, then you're right.

Comfort, Leak Reduction, and Treatment Benefits

It can't it's not going to bother your therapy. But if you're on like BiPAP, you know, or you have your expiratory pressure release like on three, well then you have a higher IPF or lower EPA.

You don't have enough ipab. So dropping the iPad could could cause you you have a few events. But but as long

as you understand that it's fine. The way to fix that, turning the expiratory pressure relief off because they should have never been added to machines anyway.

It was our backwards understanding that did that. You know, you're exactly right. And this is something I've seen in practice. You know, people, who are part of the medical, practice that I was practicing sleep medicine and, when the C flex and EPR were kind of introduced, everybody was engaging that as a default with new, patient setups for CPAp.

And the report that I was getting was that people had decreased adherence. And I'm sure there is a connection there. Furthermore, nowadays the machines have mask, programed.

The mask type is programed into it. So you're supposed to match the mask that you're wearing with what the machine is programed to compensate for. But I found that moving all machines to a full face mask setting, regardless of what your mask looks like, is helpful.

Well, you are the first to ever tell me that. And I think I think that's quite remarkable, on your part that you figured it out clinically. You figured out that patients prefer that?

I figured it out from the physics and then found out from the patients. In other words, for your listeners, there's different resistance and all the different types of masks.

But a native pillow mass has these little cushions. Okay. And because that narrow little hole, that's high resistance. And so what happens is you're going to be pressure drop across that when you breathe in.

Just like the pressure drop. Well, not quite as much as the D, but the resistance in these cushions is just the same pretty much. Anyway, you can have pressure drop.

Well, the field engineers, they're all thinking, oh, oh, we have to maintain inspiratory pressure. That's the therapy we can drop excretory pressure for comfort, but inspiratory is the therapy.

This is backwards. This is not the therapy. It's ex battery. And so dropping that inspiratory pressure was adding comfort. But then an engineer was started Philips will say.

And then look Philips. Philips actually introduces most stuff even if I disagree with it. But the others all copy it. So you can't really blame Philips.

They were the they were the innovator. I would laugh more at the copiers and copy the foolishness and it is foolishness. They actually said I read to maintain this pressure so they put algorithms on the machine.

When you put a nasal pill mask on to jack the pressure up, even more on inspiration. So what does it do? Well, these little nozzles make it like a a nozzle on your hose, and you know, and you shoot the air against the floor.

Yeah. But now with these algorithms, they've made it a pressure washer, you know, and and so they made it where people can't tolerate the masks. It has the highest adherence.

They basically have hurt adherence probably had hurt therapy for the last 12 to 14 years because no one thought through it. Oh it's it's majority pressure.

Now this will make you mad. But I then engineer I've interviewed both the engineers at Philips who are brilliant guys. Who did this. And of course they did what they were told.

And, and they never tested it on patients because, well, it was just engineering. I have to maintain inspiratory pressure. This cushions dropping the pressure.

I've got to jack it up because that's the mission I've been given to do. And, so yes, after I realized this, we did trial in

our practice and we tested it on, I don't know, 50 patients and and we found that 0% wanted the algorithm, wanted the compensation.

And in other words, everyone wanted everyone wanted a full face mask setting where you don't jack up the pressure for this cushion. And just like you figure it out clinically, which I really applaud, I figured it out the other way that was backwards and tested it and found what you did.

So that's interesting. Of all the people I've talked with, you're the first to, to actually tell me that actually there was an article about that in the Sleep Review magazine.

I think in May this year or 23, I saw that. Yeah. Well, you did okay. Yeah. Well, I mean, it's it's I don't want to come across as being so negative, but it's, it's just kind of crazy that you would put stuff on and not even test on patients.

Yeah. Because, and what's worse is me. I'm out here. Oh. Well, they put this on the machine. I have to turn this on all my patients. And we were just trusting them. And.

Oh, that's never going to happen again. So the question everything. Well, I mean, it's kind of like this in ICU on a ventilator. As a pulmonologist, I mean, this would never happen.

We we we are all over everything. We were all trained that way. But was CPAp. It's kind of like, well, you know, you got to give him CPAp and now the manufacturers know all what they're doing.

And and it's it's, you know, everyone sort of had this, this wrong view. I know I did. Yeah, I, I think everybody did, but fortunately we're pivoting now.

And I just want to recap these, comfort, improvements because I think just hearing it in a list would be really compelling for anyone who's either a seasoned user or a new user.

So the airflow feels more comfortable. There's the potential for reduced leak, particularly mouth leak, eliminating the need for chin strap or mouth taping.

Less likelihood of central apnea is developing in response to treatment. Lower frequency of swallowing air and then having, you know, an embarrassing morning, that's called aero fascia.

And some people are reporting that the noise, of the machine of the therapy is lower, which hasn't been explored yet. But I think that, you know, what I'm hearing from you is that you're getting feedback actively from these, patients who are using the venom device.

And a question that comes up is, how does the pressure setting make a difference?

Mask Settings, Algorithms, and Clinical Testing

In other words, it seems like higher pressures would yield more of an effect or a perception of comfort for the person using it. Where is that threshold now? I'm not sure I quite understand.

Audrey asked me that again. Yeah. So if a person, is hanging out at therapeutic pressures on the low end, let's say 6 to 9cm water, would they feel that effect?

Less or the same compared to someone who is over ten 1112? Excellent question. So it it kind of comes to, an expectation. A couple of the pioneers of our field, you know, who have commented on this to me, that, you know, part of the comfort that we get with V com is because it's normal to have lower inspiratory pressure when you breathe, you and I and the listeners are all probably having lower inspiratory pressure as we breathe right now.

And so the v com lowers inhibitory pressure. It's more natural. It's more human. With that. So there's also this expectation I have an expectation of how it's going to feel to breathe.

Well CPAp changes how it feels. And that's part of the problem. So if you're just starting CPAp and say you're on a low pressure of 6 or 5, you know, well the V, I'm still going to make that more comfortable because that expectation will be more normal.

If you have the V comment. Now if you starting at 12 or 16, well, it probably make even much more difference there, because it's even more overwhelming.

But still it's a new expectation. And so, you know, I'm just telling you in our studies, we don't differentiate pressure when they enter their own 5 or 18cm of water pressure.

We get similar results. Yeah, yeah, I think that's worthwhile to know. And I like the way that you put it. You know, it's human to have an expectation with a lower resistance because, you know, just getting a little bit philosophical here.

Anybody who's prescribed CPAp, which is a medical machine that you're bringing home with you to live on your bedside table and you've got this tubing and mask.

I think people, you know, rightly so, feel a little less human at first. So this is kind of making things more normal. You know, I want to say that, for anyone who wants to try this, it's worthwhile to explore.

And at the end of our talk, I'll be asking you how they can, find one and purchase it, but you ran sort of, one of your experiments was on people who really struggled with CPAp in the lab setting.

And for those who were ready to walk out the door, an option was presented to them to put the v cam in the circuit as they were trying pap therapy. The first time.

Can you talk to us about some of those results? Well, again, that's, you know, these wonderful sleep techs. So, I've had 25 years with us who are just great people and, and, and I don't think, I don't think the sleep technologist gets enough credit for their role.

Oh, my gosh, I could not agree with you more. Yeah. And I mean, they're the ones with the patient all night because for years I just, you know, said, hey whatever.

They're the experts. Let them choose the best. So when this when I introduced this and we started, you know, getting safety data for our FDA, you know, requirements and stuff, you know, they were doing all these studies and they came up with the mathlete and the and the chin strap thing.

So they figure that out. Well, when we started the trial, that went on for nine months looking at the central apnea and the chin straps, they asked, they said, look, can you add a third situation here to where someone just can't tolerate the CPAp?

They're going to pull the wires off during the sleep study. They're going to leave. We call aborting the study. And and can we bring the v com in the and I'm like well I guess they're leaving anyway.

Sure it might help. Fine. You know whatever. Well, what we found is we had 30 was it was 43 wanted to abort and the vehicle was brought in and all 43 and 41 of the 43 continued their study, which, I had no idea.

I would never thought of that. So, yeah, the sleep technologist in our in our practice, you know, figured that out. They figured out the, the, the mouth opening.

And they've added so much to all of this. You know, it's true. The sleep techs don't get enough credit. That and I think that the field doesn't, acknowledge that these are shift workers staying up all night and really dealing with the effects of that.

And there are so there are some that are so dedicated and thinking about things on a deep level. I imagine them

doing that as they're actively watching a patient.

I think it's just remarkable that you were able to show that this device can salvage those treatment studies and help people to acclimate better. Fantastic.

Yeah, yeah. And it I again, I'll give all the credit to them. I, I was, you know, had my head over here thinking about these other issues and, and that's why, you know, it's always great to have a good team.

Totally. I, I agree with that. Now I want to pivot a little bit here, because on the minds of many people, our, weight loss drugs and the effect that obesity has on sleep apnea risk.

And I know that, one of the things that you've come to realize is the effect of lung volume on, acclimation or success with CPAp therapy. I'd like you to describe a little bit how, a person's weight and where they carry their weight, whether it's in the belly or the, lower body affects their success with CPAp, or even if CPAp should be recommended.

Well, that's an excellent question.

Lung Volume, Obesity, and Sleep Apnea Treatment

And this is something we really want the CPAp community to know, because it's it's not well understood in the field and certainly in those who are sort of, aligned with the field, other, other specialties that also do sleep.

And that is lung volume is very important in the treatment of sleep apnea. When you're when you gain weight, the belly fat pushes up on the diaphragm and makes the lung volume smaller.

Now, as the lung volume is smaller and moves up, then it allows it takes tension off of the throat, the pharynx, sort of like on this tube here. If I push up, see, it's floppy.

But if I pull down, so increased lung volume will move down and pull and stretch the pharynx and make it stiffer. So gaining weight increases sleep apnea, not just from weight pushing in around the airway.

It's from lung volume. And it's more the apple build in the pear build, which may be why men have more sleep apnea than women, because men tend to have the apple build instead of the pear.

With that, increasing lung volume with CPAp overcomes that problem. It makes the airway stiffer, separate from the air pressure, pushing the the throat open.

Increasing lung volume stiffens the walls just like I was showing you here. So it also decreases the work of breathing. If you, take all the air out of your lungs right now, like, blow all the air out and then try to breathe down there near your residual volume and you'll find it's hard to breathe.

That's how heavy people breathe during the day. And it's uncomfortable. So what this has to do with is oral appliances. The nerve stimulators. The hyper nerve stimulators you hear advertised all the time.

Upper airway surgery, where they remove your uvula and stuff like that. And the sleep apnea pills that are coming out in the next couple of years. That's right.

None of those increase lung volume. They don't increase lung volume. So if you're obese, okay, your lung volume starts to reduce even at BMI of 25. So if your BMI is over 30, certainly over 35.

You've got reduced lung volume or likely. And the odds of one of those other therapies correcting you is very unlikely. In fact, I'm really pushing that we need to start doing spirometry to measure at least vital capacity.

And get some look at your lung volume, before we consider other therapies in CPAp. Because if you're overweight,

because if your lung volume is reduced, those patients need to be told, hey, we got to figure out a way for you to wear CPAp because these other therapies are unlikely to fix you.

And people don't want to hear that either. But it's just the truth. Yeah, I think that's putting the patient first, recommending that the treatment that is most likely to benefit them.

And, you know, in the context of these injectable weight loss drugs that are coming out now, I fully expect to see obstructive sleep apnea as an indicator for weight loss medication in the future.

I think there's certainly benefits to be had, even if sleep apnea doesn't fully resolve bringing the weight back down to a healthier level can have an impact on treatment choice.

Now, that's absolutely true. And that's probably where the role of the pill will be. I feel pretty certain it will have significant side effects, you know, and, it may possibly even increase fragmentation of the sleep.

But but we'll have to wait and see what the trials show. They're currently in phase three trials right now. And, we should know by the end of next year, where that's going.

But it may like, for instance, to pill in a mouthpiece together. You know, people are thinking, well, the two of them together might work. Well, the problem is, neither one increases lung volume or the pill and and nerve stimulator.

Well, neither one increased lung volume, so I'm not so sure. My good friend David can't, at Vanderbilt here has developed the new nerve stimulator in partnership Vanderbilt with Nick.

So, which stimulates the strap muscles of the neck. And it's trying to stimulate or stimulate. Excuse me? It stimulates to stimulate, pulling down and stiffening the pharynx, trying to mimic what lung volume and CPAp does.

Preliminary data is interesting, and it'll be interesting to see how that comes out in the next couple of years as well. So the field is, is getting more interesting.

Of course, you know, what I'm introducing to the field to follow the com is, in my biased opinion, is even more interesting. And that is changing the algorithms in the machine.

Which, which our preliminary results are, are just really incredible. We're dropping the inspiratory pressure. Six centimeters. Is that right? So below the exhalation pressure.

Yeah. Below. Yeah. So you basically. Well, but then we also sort of hide it. I'll have to I'll have to talk about it more in the future. But it's it's really quite it's really quite exciting.

It's the most exciting thing I've been involved with really in, in, in my whole career for sure, by a factor of many times. That's that's fantastic news.

You know, I, I like it that, you know, there's a new look at CPAp machines and how they deliver you know, certainly it's a, disruption to our field, but in a very positive way.

And final question, I'm wondering who is the V com not for who should not buy this and try it out. So if you're real heavy and you know, you're you've been on CPAp a long time and, and you like that slow in there, you may be one of the 1,012% long term users that.

That don't prefer it. Now if you if you wear it for a week, you may forget about it because, you know, we get used to what we did the last couple nights.

So, so that that there are going to be that even up to 15% of long term users who don't prefer it now that they wear it long enough, they might find they, have a little less gas in the morning and things like that.

But but those those be individuals as far as people on ventilators. And there's currently some work being done using the V common ventilation. But we're saying do not because it drops in pressure.

And yes, certain pulmonologist are who understand all this are investigating some of this.

Who Should Avoid V-Com and Where to Learn More

But we're telling people do not put it on a ventilator because it can decrease the amount of ventilation you're getting. So absolutely not in that room if you're on by level, if you're on BiPAP, you know, or by level device, you, you you would have to have your ipab set, therapeutically for you, in other words, that it can treat you alone, because otherwise, if you're needing that positive, that higher inspiratory pressure, because your, your exploratory pressure has been set lower, then knocking that down could cause you to have some events.

If you're not on auto pap and the machine can adjust for you. So I would talk to your sleep specialist about that in a bio level device. Although it. Is all this is going to just go away in the future.

I can just tell you now you know victim was just it was my way to introduce the concept to the field in a non-threatening way and a way that wasn't going to really hurt anything and sort of change our mindsets as it has yours.

For sure. You know, I, I think since the pandemic most people with new prescriptions are on auto pap. It sounds to me like if you have uncomplicated obstructive sleep apnea, prescribe CPAp or prescribed auto CPAp, it would be reasonable to try out the v com and see if it improves your experience.

I would like to make one comment to your audience. And this is very important. You know, we're talking about, you know, these aggressive words like, you know, the reverse of treatment or backwards or things like that.

I want to make sure everyone understands that your therapy was fine, okay, that you were treated and you were treated by the standard of care. And that's to the 50,000 we've treated.

You know, you were treating. And it's the fact that we missed the opportunity to give you a little more comfort on the front end is what we sort of missed in this. And, you know, I don't think anyone's treatment was backwards.

All right. I just want to say our our view of the physiology was a little off. You know, I think it's important to point that out like this. This, was standard of care.

People are getting their correct prescription. It's the comfort factor that was not as robust as it could have been. As we close up here, I wonder if you can tell people where they can buy the V come device and if they want to, learn more about you, where would they go?

Well, I don't know who would want to know any more about me. Except. Well, so not even my daughters or my wife. So I would think, my mother just passed a few weeks ago.

That was the only person who really wanted to know more about me, but, at at sleep center info, the sleep center Infocom. That is a website for sleep centers in Middle Tennessee that can tell you more about our practice and what we do here through the Middle Tennessee area, really across the state.

And to get a V. Com the website I believe it's get v com. Com okay so JT then vco imko and get v comm.com. That's easy to remember and that's what you get one I think they're around $30.

That's where they are. That sounds great. And I want to say it's been a pleasure to speak to you today. I think you certainly opened up new possibilities for better comfort and better treatment with CPAp therapy.

Thank you for the work that you've done in this regard and it's been a pleasure. Well, thank you, Audrey, and thank you for all the work you're doing, really educating the masses out there, all the stuff you're doing, across the

country, this, this, this seminar, everything to increase.

There's there's so much, miss knowledge out there, and and I think it's great that a sleep physician like yourself has made the effort to do all this.

So congratulations, I appreciate that. Thank you so much.