Sleep and Heart Health: What You Need to Know Transcript

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Intro and Guest Introduction

Sleep Tech Talk is brought to you by Fisher and Pike. Fisher & Pike Health Care is a leader in CPAP mass design and innovation for over 20 years. Their unique technologies have benefited millions of OSA patients through their top CPAT mass.

These advancements continue to further enhance patient experience and outcomes. All right, another show and that you know what that means. It's time for pre-cals.

What's going on today, gentlemen? Hey, hey, you know, we've got this conversation today where we're crossing over into the world of cardiovascular care.

I do have a little bit of experience in this space. At one point in my career, I worked for a cardiology company that made the decision to get into sleep medicine.

And what I realized is that it was very difficult to Get cardiologists to refer patients for sleep. There was even one group down in Jerry's home state of Texas.

They invested $200,000 into a sleep center. It was the most beautiful sleep centre I've ever been a part of, but they never referred any patients to it.

So it ultimately didn't work out. But it's gonna be interesting to see how far we've come and with the use of technology and innovation, we're gonna get to how they're thinking about it from the FDA perspective.

And happy to have Dr. Bott on with us today. You're right, Robert. I have the same experience you did. Cardiologists were many degrees removed from what was happening in sleep.

And even in places where they own their own sleep lab, they didn't even refer to it. So it's going to be interesting to hear her perspective on sleep, especially with all that she's doing with the FDA and the AMA.

But really and truly, it is, where are we going? I'd love to know what her insights might be about that. and how she views sleep. So yeah, looking forward to some of those insights today.

Well, it sounds like it's going to be a very exciting episode, so let's do it. Lights out. Welcome, everyone, once again to enough. I'm sorry. Lights up.

Welcome everyone once again to another episode of Sleep Tech Talk, the Sleep Podcast with your hosts and friends, Emerson Kerr, Robert Miller, and me, Dr.

Gerald George Moneycrook. Folks, once, again, another fabulous episode with a fantastic guest. But before we get started, We are wanting to say thank you so much for joining us.

Thank you, so, much, for all the views, all, the likes, and all of the subscriptions, most importantly the shares.

Cardiovascular Links to Sleep Apnea

Please continue to share this with all your friends out there and colleagues. And a huge, huge shout out to our sponsors, without whom we can't do this.

So be sure to check out the sponsors. And with that being said, Robert, who's on the show today? Hey, Jerry, we're changing the name of the Show today.

This is a bit of a crossover. It's Sleep Tech Cardio Metabolic Talk. We have with us today Dr. Ami Bhatt, Who is the Chief Innovation Officer of The American College of Cardiology.

And she is also the current chair of FDA's Digital Health Advisory Committee. This is gonna be a great episode. We're gonna get to talk a lot about AI and digital health, and we're excited to have her with us today.

Dr. Bott, it's good to you on the show. Thank you so much for having me today, I'm really happy to be here and talk about this with you. All right, so many sleep physicians treat obstructive sleep apnea primarily for daytime symptoms, but there are cardiovascular implications.

They're profound. From your cardiology perspective, and thinking about compelling data points you share with other sleep doctors about treating OSA, how can that reduce the risk of hypertension and atrial fibrillation or heart failure?

Yeah, so I think the first thing is, and you and I talked about this kind of before the show, we've always approached cardiology as like a secondary or tertiary thing.

You have a disease and now we're treating it for you, bringing you back. And we moved really aggressively to thinking about prevention. How can we get to risk factors earlier?

And I hypertension being declared an epidemic in the United States, you know, one out of two people have it has also pushed us. And what we're finding now between those people using wearables is sometimes when you diagnose someone with kind of potential heart disease or risk, and then you start treating these risk factors, they're not actually responding the way you would think.

I think that has brought to the cardiology world this idea of sleep disordered breathing. to the front and center. When people have resistant hypertension, increasingly we're realizing, wait, if we actually work with our sleep colleagues, now the blood pressure does not require five minutes.

In fact, it never did. And so it makes a lot more sense. I think similarly, when we look at triggers for atrial fibrillation, sometimes we can't really figure it out.

Then you realize, okay, the sleep disorder breathing again is part of it. So we increasingly realize it in the diagnostic phase. We have got to be thinking about it and it actually makes our treatment plan a lot easier.

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Choose Solesh. One selfie. Better sleep. Scan the QR code to know more. In your experience, how often do cardiovascular complications bring patients to medical attention before their sleep apnea is diagnosed?

And what red flags in cardiac history or exams should prompt sleep physicians to prioritize aggressive screening or treatment? Yeah. So, so first of all, to answer your first question, like how often are CB complications noticed before?

Pretty often, right? Like all the time, actually, we oftentimes have people come in and it hasn't been thought of by anybody. It hasn' been checked. If you then talk to the family you get these stories about oh my God does he snore or sometimes I think she's dying in her sleep right you just these comments from from people who kind of are in the vicinity who understand.

I Think red flags the resistant hypertension that we talked about incredibly important. I think sometimes when you're looking at blood pressure, now that we have continuous monitoring, morning blood pressor surges.

We often have them with cortisol, but we notice that sleep-disordered breathing leads to even more of a surge in

the morning. And so I that's important.

New AFib, period. Table stakes, right? So sleep disorder breathing is table stakes for that. Heart failure, a little bit more complicated. There's so many things that are involved, But always we're thinking about whether there's a trigger there, or more importantly, whether there's a potential benefit to the patient's, if not mortality, most certainly quality of life by trying to treat.

And then the last one is one that I kind of trained in, which is pulmonary hypertension. Again, you know, we need to have this be table stakes. The good news is a lot of pulmonary hypertension is shared care between pulminary and cardiology, and the pulmenary guys think about sleep a whole lot sooner than we do.

So I think that's helpful. But those would be the triggers. Resistant hypertension, table-stakes for AFib or pulminary hypertension and see if it fits in your heart failure patients.

It could make them feel better. Well, this certainly makes sense from a treatment perspective. But just thinking about sleep apnea screening, it's something that Jerry and Emerson and I talk a lot about.

In your current role, how do you see sleep-apnea-screening and the treatment and integration into cardiovascular care sort of playing out?

Screening, Wearables, and FDA Validation

So I think I would start by saying we have so many patients in cardiovascular, cardiometabolic disease that are starting to get used to measuring things at home.

And so I actually think, and I would ask back to you as well with your expertise, but I think there is such a role for wearables, not necessarily in saying, hey, this is exactly the type of sleep disorder breathing you have, But in say, over here, trigger, like sleep not normal, maybe you should go see someone, you get a more advanced test.

I'd like to see the wearable industry being a little bit more specific about sleep because sometimes, We've written some articles in the Journal of the American College of Cardiology, where I work, and we've talked a lot about the fact that it's not always having a decreased O2 set.

It's all not, always hypopneuse. There's so many details to what happens in your sleep. And some of wearables out there are very basic right now, like top level.

note to self, but that doesn't mean that you don't have some other sleep disorder breathing. And so I would love to see them get a little bit more into the physiology of things.

That's what's happening in cardiology. We're getting into heart rate variability and more details. I think that would be helpful. But in the screening side, I'm totally biased of a chief innovation officer and I run digital health, right?

But I do think getting patients engaged and having them recognize, hey, this is a problem. That's a great first step because then the patient wants to fix it.

And I think until the patients wants that, it's really hard to get people to just get sleep studies, you know? you know, from a personal standpoint, I've seen this with my mom.

You know? She has an Apple watch and she had a fib show up on there and you're a first call is to me, you what do I do? I said, let's talk to your cardiologist.

And so, yeah, it takes her on that journey. Like you were talking about where they, she took control of her process. How's that discussion with her cardiologists?

Now she's on CPAP. Now. She's own eloquence and followed that pathway. But I think to point it's, those

wearables do have a function there. And I wonder, there's this interesting fine line between wearable that somewhat diagnose and then the rigor that companies like I work for have to go through with an FDA type diagnostic device.

As you look into the future and think about where wearables are going to take us, how do you see that evolving to a more maybe a more rigorous process of these companies having to sort of prove that what they're providing these patients is really accurate, because they don't have the rigor to follow that companies like mine do to prove…

That's right….that this is actually accurate and you should talk to your doctor about it. Emerson, you're exactly right, this true in any field you are talking about, not even just cardiovascular or sleep, right?

I think we have come to a point where the remote monitoring we do used to be kind of high burden really hard, It's getting easier and easier. It getting pushed into the communities where people live.

Its getting push directly to your house, right? And doing your test there. And then the wearables are getting better and better. There's this gap. That little gap there is kind of FDA approval, which is the tech here has scientific merit, it has been approved, its validated, and here is, hey, we maybe have done studies.

We just haven't gone through the effort, time, cost, of doing that FDA side of things. By the way, the legalese changes a little bit when you say we help people figure out versus we diagnose, right?

And so that's another thing that I think companies really think about. Do we want to be in that space or not, or do we wanna be adjacent? I the key for us is in order to close that gap, we need to understand what role each plays.

I we have to very clear that with companies like yours and others, there is FDA approval, this is something that we believe in. This is going to help you diagnose.

And with the ones that say, hey, you didn't sleep well last night, You can't say I'm diagnosing you with a sleep disorder really, right? And so the marketing part of it, we have to come down a little bit harder on being clear of, this has given you a hint that, and this giving you test now.

Having said that, even though I come down a little bit hard on those who don't get FDA as wearables, I don' come hard in terms of wanting them to not do well because continuous monitoring rather than episodic is everything.

And the wearable market knows the user identity, understands how to create things that people interact with regularly. And for us, longitudinal data, and I think this is true for cardiovascular sleep, but longitudinal really helps us in a way that kind of spot data doesn't.

And so for now, our wearables are actually doing a much better job. And is there the ideal wearable for me? Absolutely. It's the FDA approved, really user friendly, getting into a lot of hands.

There are some, you and others are getting there. But in the meantime, I think as long as we're clear about medical and health and how, yes, they should have a continuous path to one another, that's really important for us to close the gap.

Then the last thing is patient education. You can't close this last gap without the patients saying, I want something definitive that is FDA approved, or the patient saying look I know what I need.

I just need to get a sense of is this even a problem? Like I don't even know, like I have no time to figure it out. Can you tell me if it is? And then if is, then I'll triage myself to the next step.

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So I actually used to work for a cardiology company and was the director of sleep services for that cardiological company. But in general, my experience has been that it's been difficult to get cardiologists on board with becoming engaged in sleep medicine, at least referring patients for sleep testing.

How do we use innovation, technology, and AI to help move the needle with cardiologist to really get engaged with sleep health? I'm so glad you asked.

So I was thinking about this. If you can mind my preparing for being here with you today.

Using AI and Innovation to Close Care Gaps

And two weeks ago, I is with the Center for Medicare and Medicaid Innovation, CMMI, because they rolled out a new program called the Access Program. It's a payment model that goes direct to digital health companies that can take your patients kind of out of your practice, manage their hypertension, alert you when needed, right?

And get paid from the government rather than like a small rural hospital needing to find the money to upfront biotech companies services because we can't afford to do that.

And today I was thinking, gosh, wouldn't it be great if you, my friends in sleep would do that for us as cardiologists. Could we have a new diagnosis AFib and have like a sleep company that is our AFIB evaluation company and you would just take the patient, do the thing that need to be done, figure out what they have, highlight us about it, teach and do it.

And I'm not saying that as a cardiologist, I don't wanna learn about sleep, but God, sleep is more complicated than I even thought. One of my really good friends, to sleep at Children's Hospital, Boston.

He and I were talking and it was like, wow, the science is so much further than it is when I was a fellow that I think it's actually a little bit too much.

This is kind of like the GLP-1 story. Shouldn't cardiologists be comfortable with GLPs as well? We should, and we increasingly are, but how many more things like that are there going to be out there?

Now I feel bad for primary care. How many things do they need to know? And so I think for some of these, I wonder if I could just find a sleep company that say, hey, yeah.

FDA approved, we know what we're doing, and we note our diagnostics. We can give you recommendations back, or we can hook you up with the right people for treatment.

And I could just give my patients and be like, hey, when you have a new diagnosis of AFib, you're going to go down this path. It may be as simple as they do a screening and say, nope, your not even high enough value screening to be screened or your prelim screen is negative, go back.

So I think something like that might need to happen because it's going be hard to teach. we could teach cardiologists sleep is important, always think of it.

to get every cardiologist to deep dive that I think is not a realistic approach or cardiology team even. And then the last thing I'll say is if your sleep reports, I'm sorry, saying it as if you're writing the reports for me, but it's okay.

If the sleep report could say, Here's what we find and by the way, this tracks with resistant hypertension, new

diagnosis, AFib and worsening of heart failure without other predictable.

If we could have a phrase that we agreed on between the American College of Cardiology, sleep medicine, and we couldn't enter that into all reports that come out of sleep studies, now I'd pay attention.

if someone gave me a sleep study and said, maybe cause of resistant hyper tension, may be worsing their heart, failure, all of a sudden my team would say, Hey, wait, that test says this thing.

So that's on the far side. That's not sending to sleep, but coming back from sleep and valuing treating sleep as much as the rest of it. I think something as simple as that would help.

Doc, thank you. There was really, really in depth and we appreciate that. But to kind of switch gears, you talked a lot about innovation and how it integrates with all of this.

Can you talk to us a little bit about your work as chief innovation officer? Okay. This is my fun part. I love my day job. Uh, I used to practice cardiology for, for 20 years.

It was the first time that I really saw what telemedicine digital health looked like, you know, full steam going from 60,000 visits to 70,00. Like we increased access through COVID because we put these measures in place.

And note to self, I started my own tele medicine clinic in 2013. Nobody wanted to join me. It just me, like one guy did it during a snowstorm once and he got on the front page of the Boston Globe.

I did not. The current job at the ACC is the following. There are so many great technologies that get FDA approval in the cardiometabolic heart, you know, disease space and sit on a shelf.

Adoption and scale is our problem. And we can address it in one way. So what we do in our program and the ACC is we work with companies all the way from startup to kind of, large device pharma, imaging data companies, and we assess what is the technology they have, where does it fit in clinical workflow?

How should they be approaching that? And not as an advisory board of like one doc who lives in New York and one doctor lives Arkansas, but rather as like the American College of Cardiology.

We see all of cardiology, we can tell you all the different places that your tech may fit and then pair it with mirrored education, to the teams and the health systems.

Here's the newest thing you need to know continuous sleep monitoring is going to tell you about periods of rebound, you know, hypertension that's happening periods hypopneas that you need to know clustering of this.

And so we start to create education for the clinicians at the same time that the companies understand how to fit. Then the third arm, which is a little bit different, is we have an investment arm that I no longer run for conflict of interest in order to keep investment separate, but they evaluate a lot of these technologies saying, can we put our kind of cards on the table and say, This is a technology that is going to be revolutionary.

The ACC supports this. And so we're really trying to take what was a siloed approach of industry, academia, or health system care delivery, investment in these technologies, and now start to bring them together to actually move the entire market at the same time.

Because without scale, we can develop tons of scientifically rigorous technologies. It just doesn't ever reach the patients. That's my daily job, which means every day is different.

One day's with, you know, a bunch of startups and the next day with a massive behemoth company. Some days are with VC colleagues who are saying, hey, this is where we're seeing things going and trying to help them see it the way we see.

So it's a lot of fun. And then I get to interact. with the FDA and CMS through my role as the chair of the digital health advisory committee and think about regulation.

And I don't like calling it regulation or deregulation, right? Both words are out there a lot right now. I think what we need to do is there is an infrastructure and we needed infrastructure with guardrails.

How do you get innovation in digital medicine to happen, and what are the guard rails you need have? And once we set that, then everybody has local governance.

That's great. One thing, and just sort of swinging back to sleep, one of the common themes, because we talk a lot about AI and technology on this particular program.

And one the statistics that we've talked about recently is that there's only one sleep specialist for every 43,000 people here in the US. So it's going to take technology and innovation to be able to, number one, identify these patients, but then to provide the care to the population that needs it.

Yes. Just yes. Right. Yes, period. To further tell you what how I think about it. Let's talk about generative AI for just a moment. Because I how many caregivers we have in the United States and globally.

When we say, you know, physicians, advanced practice providers, nurses, we're leaving out all sorts of community health workers and other people, or leaving our pharmacists, for leaving up sleep technologists, there's a lot of different ways to train people to be able to do the triage in a community where people live.

And I think generative AI, and it's advent now, allows us to take large language models that are medically trained, right? We're not going to just use the average chat GPT, but medically-trained and say, hey, can we upskill people in the community to at least be able to triage, you know, this disease versus not?

And then maybe people who are a little bit more skilled or have certification or training can upscale a bit a more and not just disease, of sleep disorder breathing.

And that takes a lot of the work away from that one guy covering, you know, 400 square miles or one lady covering 400 miles to say, okay, we've done some base work for you.

Like we're sending you the right people at the time. By the way, if you want to do telemedicine to me as a clinician in the community or directly to the patient that works too, like we could set up a system where you can help us.

Then I bring back the idea of if some companies could take all of this off our hands, that would also be great. That would be also great." So I think that combination is important, but generative AI enables us to do it because it enables to upskill and get people the right information at the time, if we create the models correctly.

Doc, thank you so much. We are out of time. And before we close, is there one or two things that you may want to have as takeaways for sleep physicians that may be listening to this show?

Yeah, I think the first is you cannot undervalue your profession in curbing the rates of cardiovascular disease globally. It is the number one non-communicable disease killer.

Is the the one killer of women here in the United States. Women are under thought of both in sleep disorder, breathing and in cardiology. So I'd say you can't under value when you're doing your work.

This is cardiovascular prevention at its best.

Key Takeaways and Closing Remarks

And so I would say, like, go ahead and include that in your conversations, in you notes, and your meetings, at your national meetings. And for those who are interested, you know, we would love to have sleep experts at the

American College of Cardiology involved in our meetings I know I was talking to American Association of Family Practice, the AMA, everybody recognizes its importance.

We don't necessarily have the expertise. So the more you can reach out to any of our sister societies, I'll speak with my society hat on and say hey, hey we're here, you know, can we come and kind of enlighten you with our expertise?

Nobody will say no, because we recognize we need help. And sometimes that direct contact of meeting someone who does it is just a lot more convincing and easy for us to understand than having a paper published where we read it and yet again say, oh, yes, Leap Supraba and cardiovascular disease, and then don't know what to do.

I'm not saying don t publish, but I m saying if you're publishing, you should also be directly talking to the other specialty. So, please come, find us and do more.

Thank you. for what you guys do and thanks for having me on the talk. Dr. Bhatt, thank you so much. We sincerely appreciate you joining us and it's been a pleasure.

And folks out there, Thank you once again for joining and don't forget, please continue the likes, the subscriptions and especially the shares. Be sure to check out our sponsors.

With that, we say thanks and lights on. Another fantastic show. Jens, what did you think? I was mesmerized by the breadth of the conversation we had today.

You go into it expecting you know, a cardiology conversation where sleep is maybe not that known. She is absolutely dialed in on the impact of what sleep disorder breathing does in cardiologist, the gaps that we see across the spectrum.

So it was so refreshing to hear her perspective on this and where we can go as fields working together. Hey, and by the way, if you're on the board of the American Academy of Sleep Medicine, she invited you to come and be a part of ACC.

So, I think that there is absolutely some collaboration there. The one thing I was super impressed with is her discussion around using industry and the innovation that's taking place in the industry, even in private equity and venture capital world and how that could potentially impact patients who are a apart of governmental health.

systems. I think that's an amazing approach. It sort of allows the government to focus on the things that they do well and then let the industry bring about some of the change and technological advancements that it certainly can bring.

I think it's really cool the different functions that she holds and how it integrates not just sleep and cardiology, but also you have the other side where it is innovation, how they're bringing that into the forefront.

And I love, love the fact that, she is really looking at how do we improve the wearables and the technology today to actually provide something that patients can, or not patients or customers because it's wearable, but that they can use to give you a lot more accurate information so that people are not freaking out.

And at the same time, it was kind of like what we have talked about in the past, that it is, at least she has provided us with this information in a sense that atleast this is something they could use a reaction that we can say, hey, I saw this on my smart whatever, and maybe I need to take some action and go check with somebody.

Just like Emerson, you talked about mom. I think that's a great start that have right now. No, agree. And it's, something that she's sort of called out here is where the gaps exist.

between the fields. And just as you said, Robert, that idea of coming back together and deciding on some agreed upon language, just something that basic that could trigger the right kind of clinical pathway for the patient could be

extraordinary.

Who knows, maybe it started here at Sleep Tech Talk. Yeah. And what about the payment pathways? When you tie reimbursement to the standard of care, I think that gets a lot of attention.

The other thing I was thinking about is that maybe she can help to allow some of these consumer companies, they can sign a waiver of liability. So they can help identify more patients without the fear that, and really use their technology to the fullest without fear of having liability because they've potentially recognized a life-threatening condition for a patient.

Well, I think this has been a great discussion and I thinks it's a good place to stop. Let's leave on a high point like George Costanza. Sounds good. All right.

Alright guys, let's call it. Awesome. All right, folks out there, thank you all so much. Until next time, cheers.