

Leading Well: The Role of Leadership in PICU Caregiver Wellbeing

SPEAKERS

Leah Harris

Professor and Chair, Department of Pediatrics

Dell Medical School at the University of Texas at Austin - Dell Children's Hospital

Asha N Shenoi

Professor, Associate Dean

University of Kentucky

Will Border

Chief Physician Wellness Officer, Director of Noninvasive Cardiac Imaging

Children's Healthcare of Atlanta and Emory University School of Medicine

Wendy Quiroz Nasser

Pediatric Nurse Practitioner

Baylor College of Medicine (BCM) | Texas Children's Hospital

Hello. Welcome everyone to the World Federation of pediatric intensive and Critical Care society's world PICU awareness Week North America podcast. Our theme is take care of those who care. This is an increasingly important topic, as we are all pulled in so many directions, we continue to want to practice with purpose, to have connection and balance and also develop meaningful relationships with each other and our patients. We are very excited to present today's experts in the wellness space and to address this year's theme through the lens of, how can we sustain the well being of the people we lead? Leadership's role in wellness is key, and as you will hear, no doubt, requires us to promote our human skills and emotional intelligence, often over traditional academic criteria. I'd like to acknowledge my partner in this project, Kathleen Parks Thompson, the Assistant Dean for clinical education the School of Health Professions and the associate director of the physicians assistant program at Baylor College of Medicine. She is also an associate professor in the Department of Pediatrics and works in the Division of Critical Care Medicine at Baylor College of Medicine, Texas Children's. She cannot be here today, but she brought us all together. With that, I'm pleased to invite our participants to introduce themselves. Dr Nasser, if I could start with you, please.

Hi Thank you. It's a pleasure to be here. My name is Wendy Nasser, and I am the Associate Vice Chair of advanced practice providers for Baylor College of Medicine in the department of pediatrics. My clinical work is within pediatric critical care medicine at Texas Children's Hospital.

Thank you, Dr Border, thanks.

Yeah. My name is Will Border, and I'm actually a pediatric cardiologist, so not a peculiar doc, but I have spent many hours in peculiars through my career, and I'm the chief physician wellness officer at Children's Healthcare Atlanta, and a professor in the Emory School of Medicine. And my scope is over the 1200 physicians at the at the Children's Hospital here, and with a focus on well being and professional fulfillment.

Thanks. Thank you. And Dr Shenoy,

Hi, my name is Asha Shenoy. I'm a professor of pediatrics and a pediatric Indian service at Golisano Children's Hospital at University of Kentucky. That's my clinical role. My leadership role is as an Associate Dean for learning environment for University of Kentucky, College of Medicine. In that role, I oversee around 90 programs and around 900 to 1000 learners, mainly residents and fellows across six campuses. One of my research interest is burnout and well being of ICU providers and in a GME setting and well being is one of the domains that I support in my GME leadership role. I am grateful for this opportunity and excited and looking forward to this conversation.

Thank you all. I am really excited to be able to be a part of this as a moderator. My name is Leah Harris, and I am the Chair emeritus at the University of Texas at Austin Dell Medical School and a proud pediatric intensivist for many decades. My first question for our panelists is, you have been selected as the leader of your critical care team. How can you go about improving the well being and reducing the burnout in your team?

I can start so I think well being involves finding out and supporting what is important to your team members in and outside of work, so that can include family responsibilities, hobbies, stressors, and then finding ways to support what is important to each individual is a requirement when you're trying to maximize satisfaction in the workplace, but it is a challenge, especially as you look at the institution as a whole. So the balance of finding what's important to the individual that resonates to the rest of the group can be really dramatic, but I think it's definitely worth it. And so looking at what is important and affecting the workplace, I think is a good place to start. So whether that means reviewing staffing plans, if that is what is creating a lack or creating increased stress for the group, or finding ways to recognize individuals, to celebrate them, to highlight their activities, all of those things I think matter and can help the well being of the institution.

Yeah, agree. Thank you.

Thank you. I can add on. To that. And I agree with Wendy, you know, I when I got this leadership role, I thought about this for quite some time, and then I think it is important to use the data on burnout. It's important to look at the trends. It is important to look at the literature, but it's equally important to actually, like, listen to your team and get an understanding of their specific pain points, you know, so what are they actually feeling?

Because unless you understand the unique challenges and needs for those who lead, you won't really get any traction. So and also, I think it is important that once you have done that, listening really looking hard at the workflows. Where are the real friction points? You know, where do people feel like they are spinning their wheels and, you know, mainly looking at workflows and identifying them, naming them, and actually trying to do something about them that is very specific to those who you lead.

Thank you. Dr. Border

Yes. And I think acknowledging that that it's, it's an 8020 problem. 80% are systemic or system issues. 20% your team, as an individual, can, can, can change. And so I think that's so important to acknowledge that. And as Usher said, you know, get some data, find out what are the main pain points, focus on them and get get results quickly, because no one wants to hear there's a yoga class at noon, and that's the well being, you know. So it's so important to acknowledge it's a system issue, largely, and that's where your your intervention should be focused.

So helpful. And yes, we've all had those yoga classes at noon once every other month. And then people are sort of left wondering, Can Can you as a group talk a little bit about what data supports, the importance of you as a leader, taking the well being of your team seriously, and working to reduce burnout for your teams.

I could take that just with one one aspect of it is there's actually a good scientific basis behind this. So Tate channelpalt has written a lot about wellness centered leadership. So this is having skills as a lead and and it's not the smartest person or you publish the most papers, but but actual human qualities, and they sort of encapsulated into four behaviors. One is transparent communication, so helping to keep your people informed, humble inquiry. I think we often as healthcare workers are quick to give advice, but you have to tame your advice monster and actually have humble inquiry and listen. The third is facilitation of professional development. Your teams, they all want to develop, and I think doesn't necessarily mean they're publishing, but they could have interest that you could develop. And then the fourth one is, is recognizing the individual contributions and achievements and just being very mindful of that. So those are the four behaviors we have looked at. The leadership index, which is a validated scale of our division chiefs over three years, and as we've scaled them up in these human skills, our leadership index has gone up by one point each year, and our burnout has gone down subsequently, and engagement has gone up. So I think there's a good data, good source of data now that shows that paying attention to to wellness, centered leadership as a leader really helps.

No, I agree with it, because the paper that you know, Dr border was referring to that shanafold and colleagues wrote, leadership quality was the strongest predictor of burnout and most importantly, how a direct supervisor's leadership style and role in influencing, you know, the burnout and well being of those the leader is responsible for, right? So for this specific study, the reason I wanted to actually call this 2015 study was like among healthcare workers who rate their leaders highly on their leadership index were at least six times more professionally fulfilled, 74% less burned out, and 66% more likely to stay in their current position. So I to me, these are really not marginal effects, right? A 74% reduction in burnout from a direct supervisor, lead is among the largest modifiable effects that are identified in literature. So that just shows that how the quality of leadership is really important,

powerful data. Dr Nasser, do you have anything to add to that?

I was. To say that I think it's really important to dive into the literature and to definitely look at all of the different ways that not only our organizations are dealing with the issues, but also looking outside at the industry and how they are addressing some of the burnout issues. When we looked at that locally, we also decided to go ahead and survey. Even though everybody hates surveys, we surveyed our population, and what we found was that even though we weren't being rated super high, the low ratings were just as important as the high ones, because it really highlighted where people were struggling, and it helped us to kind of zone in on where we needed to do more work, and that goes back to the literature, because this is a new and an old problem at the same time, but you have to be able to put it into context. And so I think having individuals and other organizations that are dealing with the same issues, providing their perspective is really important, and the only way you're going to get it is through the literature that you've mentioned.

I'm struck listening to you how you all have been able to identify leadership index and talk about it as a clear marker of that's related, clearly with well being and decreased burnout, and I suspect also increased quality metrics for the units where people are working. And yet, I'm I'm struck that there is probably a number of a few numbers of programs that have embraced the leadership index the way that you and your programs have. So this is sort of an off the cuff question, but just thinking, how do we enhance the embracing of leadership index as a tool that we implore our colleagues to use more generally,

I can. I have one thought on that. I think you Peter, Peter Drucker, who's done a lot of work into the business, is you have to measure it, to manage it. So if, if you can't, if you're not measuring it, you can't manage it. And but if you look through many programs, you know there'll be metrics, like publications in your division, there'll be financial metrics, there'll be other performance metrics. I think it just has to be adopted as part of the performance of your leaders and and I think that's the only way that, yeah, so, so I think that's just the keys, is you have to measure it, to manage it. And if, if you don't measure it, people will default to, maybe the the non wellness centered model, which is overwork, you know, over you know, perfectionism, things like that.

Yeah, no. Very helpful.

I think for us, we had leadership buy in, which is very important. You know, we have our Office of Institutional well being. They really drive a lot of advocacy around this. And for the last two years, have this ongoing program for leaders to participate in human centered leadership development. So I think that is key, as well as an institution, you have to, like, really have leadership buy in.

Yeah, it's huge. Makes a huge difference. Could occur, absolutely

for us, I think we were a little bit late to the game. We saw we're in the largest medical center in the country, and we saw our neighbors all around us endorsing joy in medicine and other programs that were really highlighting the need to really look at the workforce and what was, what they were struggling with. And so we have slowly realized, you know, this is truly important, and in order to really find out how we can improve, we

have to know where the pain points are. And so now we are also diving into joy in medicine, yes, finding out where we are happy, but where are the pebbles, and then when we I really, truly identify them, and have people explain what the pebbles are, then we're trying to dive into solutions. And all of that is absolutely led by having the administration support the leaders in this, in this pursuit of wellness,

yeah, absolutely inspiring. Makes me wonder, how do you yourselves model your own well being and empower your teams to prioritize theirs?

I can start, I think, you know, we have clear data, right? There is a JAMA Network study looked at, I don't, I don't exactly remember, around 1300 physicians at Stanford. So what they looked at is the leadership burnout directly degraded leadership effectiveness, right? So I think we have to walk the talk, right, like so we have to be a role model, right? Uh, whether we say it's around work life boundaries, work life integration, because if we don't do that, there is a direct cascading effect to those who we supervise. So to me, self care is not a person and a diligence, but it is actually a leadership obligation. So I have to remind myself periodically there is evidence for this, so that's at least what I do.

Thank you, Dr. Shenoy. Wendy, do you want to jump in?

I honestly think that this was not something I was good at in the beginning. I came from the generation where the more work you do, the better you are. And you know that that's what was expected. And it wasn't until I started realizing that, you know that doesn't work for everyone, that that only satisfies one aspect of your life as an individual, and I started paying attention to the needs of not only myself, but the group. I now encourage everyone to take vacation, to really take time for themselves, to listen to their bodies. And there may not be the best thing for staffing sometimes it is truly what's needed in order for individuals to be better, it's important to listen to what is needed from just a spiritual standpoint, from a wellness a physical wellness standpoint, and all of that matters, and it brings people back to the table, I think, in a more productive light, because they feel valued. I try to do that more often.

Yes, so important. Thank you will.

Yeah, you know, I think as healthcare professionals, we afflicted with high rates of perfectionism. And you know, perfectionism is not getting things perfect, it's, it's, it's appearing perfect. And if I think of my role, role models as a junior physician, they were the perfect teacher, the perfect clinician, the perfect researcher, and they always seem to and, and so you, you it's, it's what the Surgeon General Vivek Murthy called that hidden curriculum. It's, it's, it's embedded in you as you training and and we perpetuated, and I, I'm terrible at I'll often be, you know, working late or doing doing stuff. And then I have to catch myself and say, you know, you being a toxic role model to your junior positions. They seeing you staying late. You're being a toxic role while you're not giving them permission to leave early to get to a school meeting, a teacher conference. And so I have to keep pulling myself up with this and and, you know, say to people, get out of here, your works. Then that, then I really do the same thing. And so I think, I think that cultural change is shifting, but, but it's still, I think, a long way to go. And I think I think there is such a thing as a toxic role model, as a person who we used to sort of put on this pedestal. I think, I think we have to shift that, and that definitely comes from the very top. If you're sitting in

your office at eight o'clock at night working on emails and papers, you're not giving permission to your junior colleagues to get out early. So I think that's something that I certainly perpetually battle with. And I think as a leader, you have to take seriously.

I'm so impressed listening to the three of you, because you are all really calling upon all of us to redefine our work ethic through the lens of well being, which really is the only way we give each other permission to take care of ourselves. We would never think twice about taking care of patients, but we're so harsh when we think about taking care of our own needs, I'd love to shift gears just a little, because the three of you are leaders in this well being space, and to Ask, could you share one system level intervention you've implemented as a leader to create meaningful improvement in the well being of your team. Whoever wants to jump in first, feel free.

I can start. I'm probably going to use my leadership role because as an Associate Dean for learners, right? So well being one is one of the domains in support. I can think of many, because we use resident voices through well being in training committee. One of the system level interventions that I am proud of, and this was, this came from learners, right? Was meaningful, systematic changes implemented at the system level was expanded and improved access to professional counseling and coaching both so not only for professional counseling, but also well being related coaching and making sure that we are implementing policies across all our JME programs to ensure protected time for them to access the services. So this was a long term project, right? It took a couple of years for us to get all the product directors on board. We worked with our local counseling group, which is outside our system, for providing confidential services to expand their services during later hours so that our trainees can attend that. In addition to both this, like for example, we have resources, and we make sure that they have they have protected time to use these resources. We also track utilization and constantly evaluate the barriers to their access, at least quarterly, and we meet with this team quarterly and address them, not only quarterly, but as they arise. So I think this was probably one of the most meaningful system level interventions that I have implemented as a learner in the recent like last two years.

Yeah, very powerful.

We had developed wellness committees that initially sprung up kind of throughout the hospitals, and everybody had different timelines and they had different projects. And I think what we found that was really meaningful in the end was that we were all working towards the same goal of improving wellness, and we were all doing it differently, and what actually ended up helping was bringing all of the different groups together and talking about how had we impacted other individuals, what ideas had someone had that had been successful? We realized that there wasn't one single solution that was going to work at every single campus, because every group had something very special about them, but it was really enlightening to find those little highlights that they discovered and that we some we could share across across the entire system, and some we couldn't. But that also was a positive. And likewise, we also realized that there were people that really wanted to succeed in certain areas. So some people really needed help in leadership, some people really needed help in their clinical work, or they were having personal issues that they needed to work through. And so our in chief actually brought in organizational psychologists, and they have been amazing at helping people develop in the many different avenues that they that were needed. And so now, whenever we find an individual that is either struggling or doesn't have a mentor or a coach that can lead them in the direction that they need to go. We can

refer them to these individuals who really help them dive into at the root of their question or their need. Where do they where should they go next? And I found that that has been really helpful. It's it's not something that we had ever had before, or if people had had coaching, it was always outsourced, and now we have it internally, and it's, it's been amazing,

very interesting, Will?

Um, I think probably the program, I'm proudest of that, but have no credit for starting, but, but, but just think it's such a huge part of our initiatives. Here is the peer support program. So it was started about 15 years ago by Dr Curt Heiss, who was a general surgeon, and he had a really terrible outcome in an operative case, and he finally didn't really have anyone who could talk to and and that was about when peer support was starting to be recognized as one of the most impactful things. If you've been involved in an adverse event patient death, having a peer to talk to that you can debrief with is so helpful. And so he helped to start that program. And Dr Mike Wolfe, who's a cardiac intensivist, is our sub lead on that, and has done some great work, and we offer one hour peer support trainings. So it doesn't make you a psychologist, but it makes you, gives you the do's and don'ts if you reach out to a colleague. And we have a network now of 140 providers, so a PPS and physicians that are trained and they are activated by anyone, it could be a fellow reaches out for a colleague, or a nurse manager reaches out for a physician. Or the other thing is we are notified of every death within our system, and we proactively reach out to all the providers, and just to provide that initial peer support, you feel less alone. You feel less isolated. And I feel that's something that is critical, especially in those specialties like er the ICUs, where we have significant mobility and mortality. So I think that's something that provides great support for our providers through the system.

If I were listening into this podcast, I have no doubt. It would be at this point that I would want to ask, how do you pay for this, like, how do you get the buy in from your organization to support the coaching, the peer support, the the peer review, even your own roles? Because there are going to be some institutions that are going to be listening in, they're going to think, I'm I don't live in a resource robust environment, and I don't know that there are many health care places that are at the moment. So how, how did this start for you? And how are you able to sustain it?

I can't take credit for any of the resources that are already were in motion, but I would tell you that I am incredibly grateful for the leadership, not only at the GME level from the diu, but in the College of Medicine. This has always been a priority for our College of Medicine and our healthcare and I, you know, like have funding for, specifically my Jamie role right for this outside counseling group to contract out so that they'll have confidential support and the coaching we use a program called Better Together, coaching program that our residents Can a while. It is a four month longitudinal program, and we cover the cost. So I think I know work in a state university. Again, it goes back to the leadership quality. And like people who lead when they are human centric, they tend to support human centric leadership development and support well being for all our not only our learners, but a PPS and entire staff faculty. So I would say again, good leaders make a difference, and they find the money,

yeah, really valuable. It's an investment, not an expense. I could not agree more. I mean, just so impressive. What you are all doing when you...

Can I, Can I jump on that just

Oh please

one quick second? Just just, there's a term that that a colleague uses is there's light, light green dollars and dark green dollars in healthcare. And sadly, we are, we are mostly working with light green dollars. And I think your point is exactly right. We have to fight step by step to keep support, and I think the key is building relationship with the executive team. I think that is so critical. If you don't have buy in at that absolute highest level of the executive team, your programs will not go and we are best to have our chief administrative officer who's really been all in on this for the last 20 years? But it is like green dollars. We have to be honest about that. And sadly, when things change, often well being initiatives are the ones that are on the chopping block. So definitely have to acknowledge that in the current healthcare climate,

I think for us, we were able to highlight the benefits of having the organizational psychologists on our staff, because it was so much more expensive to outsource the coaching, which we do to a limited extent now. But if they were here, they could do preventative work, they could do they could follow up on people that they had worked with, and we had someone to go to when we had questions. I mean, they help us with everything, even developing conferences and the topics for the conferences. So it's a multi level assistance that they provide, and it always has. It's always supported by literature, for example, it's very academic. And so our, I think our leaders were able to show what a benefit it was to have these individuals on our team who could prevent people from quitting when they became frustrated, or, you know, preventing people from just disengaging. So I think from a money perspective, you can't always prove the dollars, but they are definitely there.

Yeah, I could not agree more. And as a chair Emeritus, I often have thought we spend a lot of time and dollars recruiting individuals, but we haven't always spent the same amount of time retaining and that once you've brought someone into your system and onboarded them. Their experience is so valuable that to lose somebody three years in five years in seven years in it would cost so much more to replace from a business performer that these programs, in fact, are essential. It's a great sort of stepping stone to the next question, which is, what are some high impact areas or programs you think we should be focusing on in the well being space?

I'm happy to jump, jump in there. You know, I think what, what Ayesha had mentioned earlier about efficiency of practice and this concept of practice. Saying, sort of top of license versus bottom of license. I think for providers, that is such a key thing, if you can improve, take away their inefficiencies, there have been different programs. We have a program called pebble in my shoe where every provider can drop an email to that our wellness team manages it, and then we close the loop with the ops team. You know, that has been incredibly helpful. There was a Hawaii health system that did gross get rid of stupid stuff, and they found many different things in the EHR that improved efficiency. So I think, I think getting, getting everyone in your team to function top of license and remove some of that bottom of license stuff, however you do it, whether it's with ambient AI scribe, whether it's with, you know, just better, better logistics. I think, to me, that is always high impact and a quick win.

Yeah, very important. Yeah.

I agree with Bill and in terms of, like, when you're looking at your workload and work recovery, you know, he mentioned workflow efficiency, I would say that, you know, workload and recovery is something that I think we have to pay close attention to, because chronic overload is one of the leading drivers of burnout, right? So how, as leaders, we can really encourage and have policies and programs in place to protect the recovery time, not just encouraging it, but really making sure that there is like mechanism to really protect the time of work right, making sure that we are constantly looking at the workload and reassessing, and also, like taking away Parts of the work, like will mentioned that are really like at times time suck, right? So it doesn't really help help them. And also setting norms around after hours and making that structurally possible, I think is probably one of the highest impact areas that, at least in my GME world, that we focus on,

for us, I think we've really worked on developing the community and supporting that. So one of the ways that we achieved that was by by getting rid of titles, so everybody was seen as an individual. The preference was to have, you know, face to face conversations. There's so much lost in text, and that's what we're relying on so much now, but really recognizing that that human interaction was really what was going to get back to carrying us through some of the difficult points in time has really been, I think, impactful, and it's so basic and yet so needed.

Yes, could not agree more this learning curve, though, and building the programs that you have and being able to think about what should be focused moving forward. No doubt you and your teams have stumbled along the way, and might there be missteps that you could share with us that we should avoid as we start this wellness journey and try to learn how to take better care of each other,

I have one example. So, you know, people were talking a lot about resilience and about, you know, if you make your resilience better, less burnout. So I went off and did a course on with the Human Performance Institute to be a resilience trainer. And being a being a scientist, I put a group through, through my resilience training, to half the group, and then the other group not. And then that was actually in January and February of 2020 and then, you know what happened in March of 2020, and so we measured burnout and that before, and then I measured at the end, and we really found no change in the two groups. So either I was really a terrible trainer or or these, these, these physicians. It was two groups of physicians were so resilient already that we couldn't make them more resilient. And as Asha talked about recovery, one of the cornerstones of that training program was emphasizing micro recovery breaks. And in fact, there was the one win, and that was the one thing that came out so so for me, I would say one lesson is just don't talk about resilience. You may get something thrown at you. The generally, our teams are actually very resilient, but, but recovery, they're not very good at they you know that perfectionism creeps in and that, you know the thing? Oh, I can multitask, but, but actually being more intentional about recovery makes, makes far more sense.

Yeah, no, I agree recovery versus resilience, yep, especially early in training, right? You it's like when you are like in fellowship and residency. I think that protecting that recovery time is key. As you were talking, I was thinking about. You know, preparing for this podcast in the role that I hindsight is always 2020, so you know what? What is something that I would not assume moving forwards? What have I learned from my leadership role is like

really treating well being as a perk and not as a system? I think that we do it's, it is has to be system. It has to be a system. There has to be systematic interventions. It's just not a perk at work, right? Like, like, some of these resources really feel like that, that thing, that's what Dr border was alluding to, right? Hang on. A little bit yoga here, or some of the other workshops. I think that's not going to work. And another major assumption I had was, like, you know, like, one fit size or like, 111, size fits all approach, right, assuming what the team wants. Even within a team, I think diff like, for example, in an ICU, different providers want different things in terms of their well being and whether it's recovery, whether it's like, you know, workflow intervention. So I think that is one of the missteps that I would avoid. Really like making it's very specific for not like the individual levels, but like a part of the team, whether it's for nursing staff versus leaders versus, you know, providers, we all want different, different things, so I think that's what I learned in this role.

Thank you. Dr nasler

I couldn't agree more with that. I think we definitely made that same mistake, assuming that everyone needed the same thing, and initially we dived in with that thought in mind, and then when we started seeing low attendance at some of the functions that we put together for everyone. That was really disheartening. But then we also realized that what we needed to focus on were the people that did show up, because the people that weren't showing up were the people that didn't need the activities that we were trying to force on them, and the people that were there were the ones that were really going to benefit from the activities. And so regardless of whether you make the misstep of assuming that everybody needs the same thing, you really need to focus on the people that are in front of you. And so it goes both ways. It's very humbling, but, but I think it's worthwhile, and even if you make a misstep, I think you can turn it around

I concur completely. Any last comments in this space before we close out our podcast?

I think you know, saying the right things, but modeling the opposite. For example, if I tell my team to protect their evenings and when I'm sending out emails like whatever after hours, I think always the email wins, right? So for me, I always believe leaders are washed far more than they are listened to. So behave. Our behavior sets the culture. So I think it's our moral obligation to walk out talk, you know. So that's my final reflection on this.

I think it's okay to have different personal expectations, but I do agree that your personal expectation should not be forced on others, and the only way that you're going to find out whether or not you're benefiting somebody's professional advancement or hurting them from a wellness standpoint, is if you talk to them and you ask and you get to the root of whatever the issue is. And so getting to know your team is important. Sending out those surveys, though they're hated, sometimes, are great, because you find out a lot of useful information, but really listening is, is key.

And I think I would, I would say, Please volunteer to help with this work, wherever you are through your organization. Reality is, most of it's not going to get paid. You know, all of our peer supporters are are not paid. They are volunteers. They care about their their fellow colleagues, and one of my heroes, Nelson Mandela, has a quote, resentment is like drinking poison and hoping it will kill your enemy and and, you know, I think it's easy to

get resentful when you feel like the system is kind of got it in for you and stuff, and it is hard to give that extra bit, but I think if we can all get in this together and help, I think we can. I think we can move the mountain.

I must thank you all doctors, Nasser Shenoy and border for this really thoughtful and inspiring conversation. I also want to thank you for being courageous, because discovery and innovation takes courage, and so one of my favorite quotes is Andre guide, who I'll paraphrase, said that we can't discover new oceans when we don't have the courage to lose sight of the shore. And. And what you all did was take a boat out into the middle of the ocean, away from the shore, and then you are throwing life preservers out to those people around you, and that's monumental. And so thank you for caring for teams and helping us learn more about how we can continue as a society and as a specialty to take care of each other. Thank you all very much.

Thank you.

Thank you.

Thank you.