Ruth Adewuya, MD (host):

Hello, you are listening to Stanford. Medcast Stanford's CME podcast, where we bring you insights from the world's leading physicians and scientists. This podcast is available on Apple Podcast, Amazon Music, Spotify, Google Podcast, and Stitcher. If you're new here, consider subscribing to listen to more free episodes coming your way. I am your host, Dr. Ruth Adewuya. In honor of Women's History Month, our hot topics mini-series is sharing stories of women in medicine. Today. I am chatting with Dr. Leah Backhus. Dr. Backhus trained at the University of Southern California and the University of California Los Angeles. She is associate professor of cardiothoracic surgery at Stanford University and has grant funding through the Veteran's Affairs Administration and the NIH. Her research examines imaging surveillance, following treatment for lung cancer. She holds several leadership roles within the society of thoracic surgeons, American Association of Thoracic Surgery and Women in Thoracic Surgery. She also serves as chair of the Women and Lung Cancer Task Group of the National Lung Cancer Roundtable of the American Cancer Society, and prior chair of the ACGME thoracic residency review committee. Thank you so much, Dr. Backhus for chatting with me today.

Leah Backhus, MD (guest speaker):

Thank you very much for having me. It's a pleasure to be here.

Ruth Adewuya, MD (host):

When did you first consider pursuing medicine and what sparked that interest?

Leah Backhus, MD (guest speaker):

I had a pretty early interest in medicine. I'm not exactly sure where it came from, but in the sixth grade I made an announcement to my mom, was the only person around to make announcements to. That I wanted to be a neurosurgeon. I just said, "What's the part of the body that we know the least information about?" The various people in my unofficial sixth grader poll said, "The brain. I said, "Fantastic. Then I would like to do surgery on that." I actually held onto the belief and notion that I wanted to go into neurosurgery all the way up into second year of medical school.

Ruth Adewuya, MD (host):

Now, how did that pivot second year of medical school from neurosurgery to cardio thoracic surgery, how did that interest begin?

Leah Backhus, MD (guest speaker):

Well, it was a combination of two things. One I was working in a neurosurgery laboratory and it felt like there were a lot of folks in there who were MDs, who didn't match into neurosurgery. It became readily apparent to me. You needed to be fully committed and all in. I didn't have that full commitment going. I just thought it was interesting, but I certainly figured I could probably find other things that were also interesting. Somewhat simultaneously, I'd set up meetings for myself with the local Los Angeles Neurosurgery Academic Elite, and was very underwhelmed by the support that I got from meeting with those folks. In fact, one said, "We only take Ivy League School graduates." I was like, "Okay, well Stanford's not chopped liver here." That wasn't enough for them. It almost seemed like deliberately discouraging. My big [sib 00:03:24], we have a big sib program in med school. He was also going into general surgery. He's like, "Well, why don't you do general surgery?" I was like, "Oh God, that's so general, which tells you how much I know." He's like, "If you don't really know what you want to do, it's

a great segue to other things or you can not do other things, and stick with general surgery." I thought that this was a solid plan and so I didn't get interested in thoracic surgery until my second year of general surgery, after having had more exposure.

Ruth Adewuya, MD (host):

I wanted to expound on one of the points you made, around how you set up meetings for yourself, but the meetings were not productive. In fact, felt intentionally discouraging. How did you then find the positive mentorship?

Leah Backhus, MD (guest speaker):

I think that there's something to be said for trying to find goodness of fit and trying to find your tribe of people that you think that you're going to be able to have a sustained career. There's one thing to be interested clinically in the subject matter of a particular specialty, it's another to feel that you can truly actually live, and work, and thrive within that culture and do well. At USC, we did a boatload of thoracic because exposure is everything. It's hard to anticipate doing something that you've never seen before. Then, every year we had several months worth of some combination of cardiac and thoracic exposure. All of the attendings were incredibly encouraging. The patients were of a very high acuity level, and yet I didn't feel high stress level amongst the faculty, the surgeons. It wasn't like it was laissez-faire. They were not the frazzly type to me. To me, that was great, because I don't like to be around frazzly people, but I'm not shying away from challenges. It was more of their approach to the stressful environment that they were in, which was to remain even keeled and just sort of work systematically and very doggedly to try to fix the patients.

Leah Backhus, MD (guest speaker):

It was that, along with that encouraging attitude that was helpful. I do think that you kind of need to know yourself a little bit in order to get the most out of that process of trying to find the goodness of fit. There are some people who have such high levels of resiliency and self-sufficiency that they need very little external encouragement. That they otherwise are pretty well, self-motivated enough to sustain themselves. I still think everyone can do some external encouragement, but there's some people that need a lot and some people that need very little.

Ruth Adewuya, MD (host):

Only point .79% of medical school, surgical faculty in the US are black or African American women. Of them, of all full professors of surgery, in the US, only 10 are black women. How did you find mentors to support you through the challenges of being a minority in your field?

Leah Backhus, MD (guest speaker):

I was surprised to see the statistic myself until you see it written down in black and white with numbers and then it really hits home. I feel like I probably know at least half of those 10 personally, yet the fact that I know many of them, tells you that they also understand the importance of reaching back and trying to help the next person to also achieve the same level of awesomeness. I'm a big fan of people creating their own brain trust, is what I call it. Whereby you've got a whole slew of mentors that can administer to the different facets of your life and your career. Those mentors are incredibly important and cultivating them so that these people are truly vested in you and in your best interests, because not everything that they're going to say or things that you want to hear. That's okay. That's the whole point of having them so that they can see some of the things that you can't and point them out to you.

Leah Backhus, MD (guest speaker):

I do think that surgery is its own little special category. The length of training tends to be longer. That in and of itself is I think a big branch point in the decision tree for many people. If you consider the fact that most folks going into medical school and then postgraduate training are already deferring time, at the prime of their life, that's a big barrier for sure, for women in general. Then, when it comes to the intersectionality of being female and African American, a little bit of a double whammy because you're underrepresented in both categories. There's something to be said for once you reach a critical mass in a given specialty. If you consider like OBGYN or Peds, for instance, the numbers are much more favorable when it comes to representation of minorities and women. That becomes a positive self-fulfilling prophecy because the more visibility that you have, the more exposure that you have, it's the whole argument for diversity in the first place.

Leah Backhus, MD (guest speaker):

When you have diversity at all levels, but particularly in leadership levels, which is where it tends to be the most sparse, you're able to bring in ideas, thoughts, experiences, et cetera, to come to bear on critical decisions, that hereto forum may not have had that influence. Until you reach that critical mass, it's much more difficult to move the needle and make those incremental changes. I just think that some on specialties have reached that mass faster, in that you've got still some significant bastions of homogeneity within the medical specialties that have got to catch up.

Ruth Adewuya, MD (host):

Yeah, I agree. The past few years has elicited a reckoning in the entire world and country around unconscious bias, around diversity equity, inclusion, and justice, when we talk about the impact of this on surgical education specifically, how have you seen unconscious bias effect surgical education? Why do you think surgeons may be particularly susceptible to unconscious bias?

Leah Backhus, MD (guest speaker):

I think that we are just as susceptible. I think that some of the lack of diversity, within the specialty, helps perpetuate the problem we have across the board. Become a lot more comfortable with the whole concept of unconscious bias, and recognizing it, and calling it out, and that's very helpful. Its effects can be hugely detrimental. Obviously, when we're talking about not just within the tiny sliver of medical academia, but just in all aspects of medical care and particularly with our interactions with patients and the linkage to patient safety, and quality of care, and that sort of thing. It's so much broader than, oh, we need to see more black and brown and female faces in a given specialty. I think when we're able to create linkage between diversity and improvements in patient outcomes, that's a universal language that all of us can speak. All of us can get on that bandwagon and feel good about promoting it, if that's our end game. That's honestly going to be the best way to actually move the needle.

Ruth Adewuya, MD (host):

Yeah. I think you answered my next question around how do we reduce unconscious bias? I think that's something that I've heard from experts within the field around that linkage between its effects, and patient safety, and quality. In your opinion, what's one way that we could connect those dots?

Leah Backhus, MD (guest speaker):

A very low level intervention would be to require all your faculty and trainees to take implicit bias test. It's just like doing your diagnostics before you do something therapeutic. Before you're able to do that, you need to actually de-stigmatize it. If you make it seem as if only certain select derelict, terrible, closeted, racist people have unconscious just bias. Then, clearly no one ever wants to be up there admitting that they have it, but if you're able to de-stigmatize it and normalize it to the point where everybody has it, then you can finally start to own it and create the emotional safety, where people can actually speak up. As a young trainee at LA county hospital, so funny, I took French in high school, which was super unhelpful. Quickly picked up my little medical Spanglish and it never got better beyond just this rudimentary medical Spanglish. The reason why somebody told me this, that was very helpful. If you want to learn a language, speak to children because the children will laugh at you and correct you, whereas adults, particularly those who are your patients, who are in pain, who are discomforted, et cetera, they're not going to take the time to correct you.

Leah Backhus, MD (guest speaker):

You need to be around people who are going to actually call you out and correct you, when you make a faux paux, which we all do. We all do. Nobody wants to be embarrassed. That's so uncomfortable, but you need to check yourself to make sure that you're going to be receptive to when somebody does point it out to you. I have a talk that I give a unconscious bias and communication in the operating room. In preparing for the talk, it was actually very enlightening to me because I never gave a whole lot of thought in terms of how exactly I communicate things in the operating room. It's a very closeted little world in there, once the door the OR closes. There's a whole lot to be gleaned from that and a whole lot that we could do better about that, but when I give the talk, I open it with a very self-deprecating story, where I put my foot in my mouth, and nobody told me. It was a student who I had not met before, who had come in and scrubbed into a case. The student was closest to the mayo stand. I asked the student, as I often do, to try to keep them engaged, to hand me a silk tie, which are dangling off the edge of the mayo stand.

Leah Backhus, MD (guest speaker):

The student looked down, like it was like a dramatic move. He leaned over like super close with his face, like almost touching the mayo stand. I was like, it just blurted out like, "Dude, what are you doing? You're going to contaminate the whole mayo stand." Because I was trying to be protective of the surgical field, but I really gave no consideration to what the words that were going to come out of my mouth would sound like. That wasn't so egregious in and of itself per se, but it was in retrospect, the fact that after the case is over, the resident then told me, "Hey student X is visually impaired." If you consider that I assume everyone in the operating room is of normal visual acuity. Maybe that is a bias, but I felt horrible to this poor student, who was just trying to do what was asked of him. That I had asked him to do. Then, I berated him publicly for doing it. It's such a hierarchical place in the operating room. Nobody really wants to call out the primary surgeon and tell them something. I went back and apologized and owned it. Nobody told me I had to do that. Nobody made it mandatory, but trying to it make it still a positive by letting the student know that I knew and that I wanted to atone for that.

Ruth Adewuya, MD (host):

Thank you so much for sharing that story. I think a lot of student doctors may face similar situations or situations where they're faced with unconscious bias. In this case or in other cases, how do you propose that they advocate for themselves and protect themselves? For the student, what could they have said at that time to you?

Leah Backhus, MD (guest speaker):

I would've much preferred for the resident to have spoken up on the student's behalf. Because I don't think that a student meeting me for the first time in my operating room, would ever really feel so empowered to have publicly corrected me. Not that it would be inappropriate for them to do so, he could have totally done that, "Hey Dr. Backhus, I'm sorry, but I don't know if you know this, but I'm visually impaired." I don't think that's the expectation. I would put the onus on the rest of the team, particularly the resident who had the knowledge, if that resident had have advocated for him. Now, maybe the same tenant applies and that maybe the resident didn't feel empowered enough either to call me out in the middle of the surgery. There's certainly times to do it and times when not to do it and sometimes public is better. I think a lot of times private is better. People tend to be more receptive when it's divorced from that embarrassment factor. When it really is just, "Hey, I'm just trying to help you."

Leah Backhus, MD (guest speaker):

It doesn't help me directly to take time out to correct you on this, but I think it's for the better good. Which is why I want to sit down and talk to you. I've actually had instances when I myself have done that. Because I'm not running around with a giant flag trying to correct any and everyone's transgressions when it comes to their unconscious biases that may come up at inappropriate times. I feel like if I have taken the time out to pull somebody aside, and give them a little tiny sidebar, or feedback, that they should be receptive to that. I myself try to be receptive to it. I think it happens less the more senior you get, because of the hierarchy and power differential. That the higher you get, you just got more people around you that are like yes, people and less people around you that are going to call you out. That actually can be more difficult for people in leadership positions to cultivate that culture amongst their team that, "No, please do come see me and let me know if you see something." I have this phrase in the operating room, which is hilarious, because I just used it the other day. Which is from the airport it's in my talk too. I'm like, "If you see something, say something."

Ruth Adewuya, MD (host):

Yes and I think it goes back to what you mentioned earlier about the safety. That a team has to have the group around you needs to feel a sense of emotional safety, to be able to have those conversations and understand when to have it, whether privately or publicly. Yeah. If you see something say something that's fantastic.

Leah Backhus, MD (guest speaker):

Right. It literally, just, I don't know, two days ago in the operating room, the intern who's doing the most low level task, holding the camera, at which point you're actually able to be quite observant, because you're not so laser focused on the field, but she saw something and she said something. I go, "Hey Taylor, awesome. Yep. That shouldn't be there. Good on you and thanks so much." Then, I reiterated the phrase to take the time out, to applaud her for that effort too, just helps to drive the point home further.

Ruth Adewuya, MD (host):

I want to pivot to your clinical work and the research that you've done around lung cancer mortality and how it's correlated with residential segregation for black patients. Can you expound a little bit on what you think is driving this correlation and perhaps even how your colleagues in thoracic surgery have received some of the results in your findings?

Leah Backhus, MD (guest speaker):

That paper was a little bit unexpected, kind of like the numbers that you put up there in terms of full professor demographics. Like many things, it's not a single answer, it's multifactorial. In the same way that you have food deserts, you have healthcare deserts. In the same way, you can have proximity, you can have other invisible or unmeasured barriers to care, that are otherwise not so apparent. That aren't going to necessarily come out and jump out as points of potential intervention. We also have the heterogeneity of geography. One of the things that we struggle with are how do we move away from just cataloging disparities? Because everyone's tired of that everywhere you look, yes, okay, there's a disparity here, and there, and there, and here, and there, but how do you actually address them? That's the part that's missing? Many of the most successful solutions and interventions are small scale and very local or regionally based. Because that's what you wind up having to deal with. That study illustrated that point, in that there's so many local factors that can't be measured in a large national claim's based study. As successful as a lung cancer screening intervention in rural Virginia, might be trying to scale that up and apply that to the migrant worker population in Central Valley, California doesn't necessarily correlate.

Leah Backhus, MD (guest speaker):

On the one hand, it kind of minimizes the impact of small study. Even though say they've had like 500 fold increase or some outcome, which is fantastic, someone may always look at that and say, "Yeah, but that was literally in like rural Virginia." When they try to follow the blueprint, which is take a small study and make it big. It doesn't translate. Then, they get dinged for that and then that results get somewhat lost within the literature. I think that's some of what we're dealing with here. Part of it would be in appreciating and highlighting those smaller interventions, on broader stages, so that they're not relegated to a small abstract at a tiny regional meeting. Then, some of the work falls upon the researchers as well to try to see what are the elements of it? Let's not throw the baby out with the bath water, but maybe there are some elements that could translate to a different population. You have to be hopeful. You've got to have resiliency. I think any researcher has had to develop their own thick skin in terms of grant rejections, manuscript rejections, failed studies, et cetera. If we are nothing else, we should be a fairly resilient bunch, to know that the underlying question or problem that you're trying to address is so important, that it is bigger than your ego, and that you need to keep moving forward.

Ruth Adewuya, MD (host):

I want to touch on a point that you made earlier about raising a family. We all know that surgery is notorious for its extended hours and especially for women, having to do extended training the implications of that for raising a family. You mentioned that you're a mom as well. How did you navigate that pursuit of surgery and expertise in your field, while thinking about raising a family?

Leah Backhus, MD (guest speaker):

I think you're giving me a little bit too much credit in that I don't think I was nearly as deliberate and thoughtful as I could potentially claim to be, in retrospect. I just knew that it was important. That I would not be fulfilled if I had become the world's greatest surgeon and had never had a family or vice versa. If I had like a gaggle of children and a great marriage and never have perceived my dream of being a surgeon. Neither one of them by them would have completed me. I think the key to this success is that, well, I don't know success, it's still a work in progress. You know, it's having a really supportive partner. You got to have a partner that buys into this whole thing with you. Surgical training is hard on marriages for sure. It's hard if your spouse is in the healthcare field and it's hard if your spouse is not in

the healthcare field. It's just hard, but you also kind of need to have this village of people and infrastructure to help you.

Leah Backhus, MD (guest speaker):

I can't make lunches every day, but my husband did that and he liked it. It was great. One of the things that I often talk about is how I shifted the bedtime for my kids when they were little, even before kindergarten. I'd have my husband keep them up super late so that I could see them when I got home. Whereas most kids would be eating dinner and going to bed by seven, eight o'clock at night, my kids are up and hanging out and waiting on me to get home at 10. That's fine, because they slept later, they still got their requisite hours of sleep, we just shifted it. It worked for me, because then I got to be happy and whole and feel fulfilled as I went out the next day to go to work, knowing that I'd actually seen and played with my kids. I think you can come up with lots of little work arounds like that. You're going to have to either pay somebody or have a family member to fill in to do the things that you can't do and that's okay. That you've got to figure out how to absolve yourself of the guilt of not being everywhere and doing everything, as you may have some ideal in your brain as to what good parents do.

Leah Backhus, MD (guest speaker):

I remember talking to, I think it was my son. He was really little like maybe four or something. It was a super vulnerable moment, but you know, it's all quiet. I'm like tucking him into bed and I'm like, "Hey buddy, do you ever think, would it be good if mom just stayed at home and you had to stay at home mom?" He thought about it, it was a thoughtful response because he paused, and he was like, "Nah, not really. Because what would you do all day when we're at school?" He's like, "You would be bored." I was like, "Huh, thank God." Because he could, "Yeah, for sure, totally wish you were here every day." Then I would've been like crest falling and totally broken going to work the next day, but thankfully he gave what I thought was a very thoughtful and reassuring response.

Ruth Adewuya, MD (host):

There's been a lot of conversation lately around how a lot of women are leaving the medical field for one reason or the other. Going back to what you said, creating your own village to help support you, I think is one way to do that. Do you find that there are more incentives needed, to be able to improve that kind of work life balance for women in the surgical field? I don't know if I like the term work life balance, because I think it's not necessarily in balance. There's always something that gives.

Leah Backhus, MD (guest speaker):

Yes. I do think that there are things that we can do. One of them is to just try to normalize things. I think one of the things that young parents can fall pray to are the external expectations of what they should be doing or what their kids should be doing kind of thing. Coming up with your own priority list and recognizing that the life that you're cultivating with your little progeny is amazing and it has value in and of itself. It doesn't necessarily conform to anybody else's ideal. It's not something you're going to see in Parents magazine necessarily, but your children can and will have an amazing life. It's just different. My kids have grown up with a dad who makes amazing gourmet meals every night. They know not to ask me what's for lunch or what's for dinner and that's fine. That's perfect. They get to go on amazing trips and conferences all over the world, and do really cool things, and come to work with me, see what I do and how I help people. That stuff is priceless.

Leah Backhus, MD (guest speaker):

Until you learn to value that and weave that into the fabric of what your ideal is for your family, then you're going to be disenchanted and there's going to be all this cognitive dissonance between what you think you should be doing and what you actually are doing. If you learn to value and change the lens within which you view what you're doing, as positive, and important, and creating a different type of kid than the next person, then yeah, you will be dissatisfied. We just do better at showing people that this is doable and it's great.

Ruth Adewuya, MD (host):

I want to layer that with the fact that on top of all of these responsibilities, you're also actively involved in diversity equity and inclusion initiatives. Can you talk a little bit about what you're doing there and how that aligns with your full-time clinical work research?

Leah Backhus, MD (guest speaker):

I have to say that I feel like I do quite a bit, but I don't do quite a bit officially. A lot of it is like this. It's this unofficial stuff and that's fine because I have enough official quote unquote stuff, that's not linked to diversity efforts, that I feel comfortable in doing it. I didn't feel that way initially. I think many young people, particularly within academia, are going to struggle with that. You have to recognize the fact that you're in a position of influence and try to cultivate it and use your powers for good if you will. What I never wanted to happen is for me to go and stand up at a podium and for someone to say, "Oh God, here we go. I know what she's going to talk about." I want them to say, "I know what, she's going to talk about surveillance after treatment for lung cancer.

Leah Backhus, MD (guest speaker):

I want them to highlight my academic achievements. That's just my own personal bias. I do think that academic institutions are getting much better at hard wiring the merit associated with doing work in the diversity spaces, such that you can actually claim credit in your promotions package and things like that. We're doing better at valuing or attaching value to the work that's being done. There's the minority tax, of trying to make it not a tax, but something that is seen as valuable to the university, to the institution, to your hospital, your healthcare system is where the disconnect often lies.

Ruth Adewuya, MD (host):

Thank you for sharing your perspective and your truth around how you approach those things. To wrap up, my last question for you is, around what advice do you have for whether student doctors or young physicians, who are minorities in their fields, and looking at specialties that might have a lot of catching up to do, what advice would you give?

Leah Backhus, MD (guest speaker):

I think it would be to do what I did organically. Which was just to try to just create your brain trust, figure out who your people are, who your advocates are. It's a whole lot of peer advocates and colleagues initially, because that's who you know the most. Then, you can go through the task, it's almost like dating. You've got to go through the task of identifying people that you think at least on surface, that you're going to have some connection with, either because they're doing what you want to do in the future, or they're doing what you want to do right now. Interviewing, and meeting with these people, and learning whether or not there is that goodness outfit. That's what's going to give you the resiliency to make it through this marathon of a career. You hope it's going to be a marathon. You don't want to just fall off this edge of a cliff somewhere. If you feel like you're getting close to a cliff edge, you

need to be able to know who are your folks that you can throw your grappling hook to, to actually reroute yourself, reset, do whatever it is that it's going to help make you whole again so you can go on until the next challenge.

Ruth Adewuya, MD (host):

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