



COMMENT

Mentor–Mentee interactions: a 2-way street. The APS–SPR virtual chat series

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Steve Abman (SA): The American Pediatric Society (APS) and Society for Pediatric Research (SPR) Virtual Chat series on “Challenges in Pediatric Academic Medicine” provides a forum for bringing together diverse members of the pediatric academic community at many different stages of their careers, ranging from students and residents to fellows and junior faculty and senior leadership. The goal of this series is to openly and directly address key challenges facing academic medicine through organized discussions that includes a panel consisting of outstanding leaders in the field. Past topics have included navigating career transitions, disparities in health care and outcomes, the Dean’s view of academic medicine, and valuing and achieving diversity in academic medicine.

Today’s session focuses on mentorship, which has been identified as one of the most vital determinants of launching, developing, and sustaining successful careers in academics, especially for the clinician-scientist. Although much has been written and discussed regarding mentorship, many complexities regarding the mentor–mentee relationship and related issues remain major challenges.

We are delighted to hear from three outstanding and experienced panelists for today’s discussion. It is our pleasure to welcome Dr. David Cornfield to our panel. Dr. Cornfield is the Ann and Robert Bass Professor and Chief of Pulmonary Asthma and Sleep Medicine at Stanford University and Lucile Packard Children’s Hospital. Dr. Cornfield is internationally known for his basic laboratory research in the developing lung circulation and pulmonary hypertension, exceptional clinical care, extensive academic leadership, and success as an outstanding mentor.

We are also excited to hear from Dr. Tessie October. Dr. October is an Associate Professor of Pediatrics, in the Division of Critical Care Medicine at George Washington University (GWU). She trained in Pediatrics at Children’s National Medical Center, completed her Fellowship in Critical Care, and obtained a master’s degree in public health at Columbia University before being recruited back to GWU as faculty. Dr. October is board-certified in Pediatrics, Critical Care Medicine, and Hospice and Palliative Medicine. She has already developed an outstanding reputation for her extensive work in these fields as a national leader with regard to research, care, leadership, and mentorship.

Our third panelist is Dr. Anne Libby, Professor and Vice Chair for Academic Affairs for the Department of Emergency Medicine, at the University of Colorado. Dr. Libby has a remarkable training background, including obtaining her Ph.D. in Economics from

Washington University of St. Louis and her postdoctoral fellowship in Public Health at the University of California-Berkeley. Since joining the faculty of the University of Colorado in 2000, Dr. Libby has built an incredible national reputation, beginning with her research on the financing of healthcare systems, and more recently, as an outstanding national leader in mentorship and faculty development. In fact, at the University of Colorado, she has developed novel and highly successful programs to train mentors and mentees, clinical faculty scholars, academic leaders, and developed programs to succeed in team science, as well as focused programs regarding women in medicine.

Finally, it is a pleasure as always to work with Dr. Stephanie Davis, Chair of Pediatrics at the University of North Carolina and President of the Society for Pediatric Research, who will moderate our session.

Stephanie Davis (SD): Thank you, Steve. It has been great working with Steve. We are excited to hear the wisdom and insights from our three speakers on mentor and mentee interactions. We will start with our first speaker today, Dr. Cornfield.

David Cornfield (DC): Great. Well, thank you, Steve, for that kind introduction, and thank you, Stephanie. I appreciate both my co-panelists being here. I’m really glad, in particular, to be able to go first so that I can leave time for them to share all their wisdom. I plan to provide you with some narrative. I am very happy for the opportunity to provide some insight relative to mentorship.

I think it’s true that all mentorship begins when you are a mentee or as a student. Any story, any narrative about one’s perspective on being a mentor, I believe, needs to begin with some perspective on how you came to your place of mentorship. For me, I think, like most of us, we learn how to be a mentor in our earliest stages of life. One of the lessons that I learned quite early in my childhood even was the power of being a physician.

I remember very well growing up in the cold Wisconsin nights, spending some time on house calls, actually with my father. And I remember one time in particular, when we went to see a patient, I was maybe 6 or 7 and it was exceedingly cold, and the child was complaining of pain. Pain in the abdomen. It seemed likely to be appendicitis. My father was in the bedroom examining the patient, and the family began posing questions to me, just a 6-, 7- or 8-year-old kid, about what might happen to their child if it was appendicitis.

It impressed me that these people thought that I was vested with some kind of knowledge, that I had some mantle of authority

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because I was in close proximity to the doctor. Of course, I knew nothing, and, of course, I avoided giving any information that was too imprudent because, obviously, even at that age, I was already firmly convinced of my ignorance.

That left quite an impression on me, and I can still see today the anxiety, the concern of those parents, and that impressed upon me, the power of being a physician, the power of actually having this ability to touch people. That child did have appendicitis and ultimately did well.

Mentorship continued, I think, when I kind of stumbled upon a role model as an undergraduate in Madison, Wisconsin, in Dr. Norm Fost. He was a tremendous role model as an academic pediatrician, and also a vibrant intellect, with unquenchable curiosity, and a wry wit, who did not suffer fools and was willing to speak truth to whatever student, or to any faculty member, and did it in a way that was always well received. From Norm, I really learned about the ability to kind of penetrate to the very core of the issue. Try to deal from principle, not from any *ad hominem* position.

I then later learned a little bit more about mentorship when I was a Chief Resident in Kansas City and began to recognize that people looked to me to help make their day a little bit better and help make their time a little bit better. I recognized the importance of selflessness, to perhaps take someone's calls, when they had a stressful situation or to try to teach somebody a lesson about the bedside without doing it in a way that left them somehow singed or hurt. I then learned that mentorship was about the interpersonal connection, this really resonated most powerfully with me. It didn't matter to me so much, whether or not I was learning about renal physiology from a person like Brad Warady or if I was learning about neonatology and histology from Don Thibeault. I really wanted to have that connection with the person. That was really important to me. It was so much more important for me to have a person that I respected and that I connected with as my mentor than a subject matter expert.

I did know that I wanted to do a subspecialty. I remember very clearly, as I'm sure Steve does too, when I called him to get his thoughts about a career as pulmonologist. Steve was generous with his time and perspective. I decided to go to Colorado, based largely on my interview and my conversation with Steve and other people in the program. The people I met were folks that I wanted to become, folks that I wanted to be like. I learned a lot about medicine when I was in Colorado, and I think I learned, really how to be, and what I hope I have been, a good mentor.

I saw the way that folks there modeled the excitement for discovery, the real thrill of creating new knowledge, and the real importance of communicating new knowledge. I saw how people were genuinely invested in me, selflessly, that they were willing to put more time into my abstract, my paper, than they were in doing anything for themselves. I was so aware, too, that I was going to be a physician scientist, I loved medicine, I loved the power of medicine, the power of biology. I didn't know anything about the power of discovery. I soon learned that if you could create new knowledge and somehow be an ongoing creator of new clinical knowledge, that was even more outstanding than being a mere consumer of knowledge created by others.

I got so enthralled with this idea that I felt compelled to do something at the bench that might have some implications at the bedside. I came to understand that that was not an easy path, but it was possible, largely because we can take the power of our bedside observations, and translate them into questions at the bench, and bring them back to the bedside. This was a revelation. It's an absolute revelation still.

It was a wonderful time for me in Colorado, and I went on to the University of Minnesota, where I began my own programs. I tried very hard to model those sorts of behaviors. I tried very hard to be generous and excited and giving, and I recognized that mentorship has so many more components to it over time. I recognize

the nuance of how many mentors does one need? What is the difference between being a sponsor to somebody and being a mentor to somebody? How many mentors can you have for different purposes? I also saw the real joy of my mentors becoming my colleagues and my peers and saw how those relationships changed over time.

I think that one of the great joys of academic medicine and medicine in general, perhaps, is this idea of creating these lifelong relationships, that allow you to see yourself reflected over time, and see how you've changed, how you've grown, how you've matured, and how you can have this interactive relationship with people who played such important roles in your life. To say that the mentor mentee relationship is static is giving it a grave disservice. It's a dynamic, life long, organismic interaction, and I think, teaches as much as you are taught. You are as much a student, as you are a teacher. I think, for me, that's the actual, critical component of the mentor, mentee relationship. I'm learning from my mentees; I'm being mentored by my mentees. I think I sometimes mentor my mentors. The dynamism of that interaction is grounded in the humanity of the relationships. Because of the importance of the humanity of the relationship, I've focused, in my present program, on really making sure that I am matching my fellows, my post docs, with other folks besides me. These folks can help them along the way, and serve other components of their mentor, mentee relationship, and yet I still remain invested in making that match so that people can have optimal growth. That demands a lot of insight. It also demands a lot of unselfishness.

Recognizing that maybe this person could come in my lab and do some work, but wouldn't it be much better if they went into Mark Krasnow's lab as an HHMI, a pulmonary biologist than my lab. It's that persistent attention to the humanity of each person. It's also, that commitment, unselfishness, that I think makes for a really wonderful, long term, evolving, living, interaction, that I can look back at over time and feel very proud. So that's my story of mentorship to some degree. We'll get into the dynamics a little bit more later.

(SD) Thank you, David. That was great. How long does the mentor mentee relationship last?

(DC) Well, I probably addressed the question during my monologue, but I think that it lasts as long as both parties feel some mutual attraction. There are occasions, I think, when people need to walk away from mentor and mentee relationships, and maybe we can talk about that a little bit more. One may gracefully exit the mentor mentee relationship.

I think for the people that I've been engaged with as my mentors, that I call my mentors, I don't believe that any of those relationships have ever ended. My high regard for these people is unwavering and without any time horizon. I see this, in so many people that I view as mentors. I have mentors in the vascular biology community, or even in the university administrative side; I feel like there's been a lot of people that have invested in me and in my career. So, I don't think there's an expiration date on any of these relationships. They obviously change and fulfill different roles. There's different levels of intimacy over time, but, I like to think that if you're a really good mentee, or you're a really good mentor, you're a collector of people, and you continue to collect, over time. Creating a richer, inner life along with all those mentees and mentors.

(SD) Thank you David! We will now hear from Dr. October, who will now share her philosophy about the mentor mentee interaction.

(TO) Thanks, Stephanie. Always hard to follow David, but I shall try. My philosophy on mentoring is that it doesn't have to be complicated, and it shouldn't be scary. Most mentors truly get joy out of mentoring, and we celebrate your successes as our own. We want to see young, eager replacements in the field, and we know that you look often at us as if we are gurus or our successes are

unattainable. But we've all been in your shoes at some point in our lives. At the end of the day, we're human, and we strive for a human connection that's meaningful and advances your career. So, don't be afraid to ask.

When I think about the key takeaways that I would like you to think about when you think about mentoring, I'll share a story that just happened a couple of weeks ago, that highlights these four areas. It was a mentee of mine who is a resident at another program, so she's not at my institution. She found me at a national conference, admired my work, told me she had read a lot of my stuff, and she wanted to do a secondary analysis of my data. So, we met, we exchanged numbers, we had several interactions back and forth, and we were able to come up with the research question, and figured out how to get the data to her. She blew it out of the park, knocked it out of the park. She did everything and checked off every box when I asked her to do things.

This might speak to what David just brought up about the length of a relationship or whether or not there's a natural end. We submitted the manuscript, she's first author of the publication, we tied it in a nice bow and I thought that relationship was over, in that, you know, she's someone who I'd only met once. She's not at my current program. We didn't have a natural reason for a long-term connection. However, about six months later, which was just a couple of weeks ago, she contacted me to say she saw on the internet that I had gotten a new position. She just e-mailed me to say, "Hey congratulations on the new job."

I checked in with her and said, thank you. How are things going? I got a very tepid response, like there was definitely something else going on. So I leaned in and said let me give you a call. I called her, and she was in a real pickle. She had a clinical situation where she was supposed to start a fellowship, but because of COVID, she didn't start the fellowship, and now she was in this place where she didn't know exactly what to do. I helped her figure out how to get a clinical position. Now she actually has a job that she's starting. When I think back to that, it highlights four things for me.

The first is don't typecast. She had put me in a box as her research mentor. It was a very finite relationship. It was something that came, and we attained our goal, and we closed it off, and by typecasting, or putting me in the box, she didn't actually think that I could help her in these other ways. So, when she reached out to me, it wasn't to tell me about her clinical situation. It was really just out of kindness of just wanting to say hello. I want to say to mentees, your mentors have access to other parts of your life if you let them in and we're more than willing to help.

The second thing I'd say is that the reason I was more than willing to help was that she was a fantastic mentee. What I mean by that is she met all the deadlines, she was on time, she could follow through. I was willing to put my neck on the line for someone who I had no clinical relationship with, I was willing to do that because she had some core values that aligned so well with mine, and I knew that she would be successful in a clinical enterprise. So being a good mentee can serve you well later.

The third thing I would say is for the mentors, how your mentees know how to be a good mentee is by the guidance that you have given them. I set her up for success in that I told her what my expectations were. I told her how I wanted to receive communications. We talked during our first couple of meetings about what my expectations were for research and how to follow-up with me, and how to know if, in 2 weeks, you don't hear from me, you probably should e-mail me again, because it's likely that I forgot, and don't feel bad about it. So, in a lot of ways I set her up to be successful, and then she blew it out of the park.

The last thing I'll say is your job as a mentor is really to make a human connection. To a mentee, we can often be terrifying, and sometimes you have to watch for clues that they're giving you and lean into it. I think if we didn't have that open human connection type of relationship, I could've seen her message as just like a

hello, and just written back, thank you. That would have been it. But somehow I left the door slightly open for her and that's our job as mentors, to leave a slight crack in there so that they know that there's an opportunity to come back in. So, I'll leave it there saying that I have enjoyed, like David, being a mentor and being a mentee for my academic career. In both roles, I am a mentor and a mentee.

(SD) Great, thank you! Tessie, can you discuss the importance of the mentor mentee connection, how you form this connection and how do you know that it's not working?

(TO) That's a really good question, So first, before I go to how it's not working, the human connection piece is the number one tip, I always say that you have to meet your mentee where they are. Learn who they are as a person. I'll give you an example from one of my first earlier mentoring relationships. I'm a storyteller, so you have to hear another story. When I was in college, I worked at an organization whose job was to get homeless folks who were unemployed back into the workforce. I was super excited about this job, because my role was to help them with their interview. So I was charged and excited about helping them develop their elevator speech. We were going to knock this out of the park.

As I started meeting the clients or these mentees, I realized that most of my clients didn't have watches. So, we need to actually talk about how to be on time for the interview. Several I noticed wouldn't make eye contact. When I probed, it was that there's a sense of embarrassment that happens with a lot of people who are homeless. I realized we can't work on an elevator speech until we work on some of these more basic skills, these basic skills of how to make eye contact, so that you don't look like you're not engaged in the conversation. So how that translates into academia, I think, is that our mentees come in all different flavors, based on their prior experiences, and not everybody who walks into your door will have researched who you are.

You need to decide as the mentor, is it that they're unprepared because they don't care or is it that they don't know that that's important to do? I'll say, specifically for our underrepresented minority folks, women, first-generation physicians, or even just college graduates, these skills have not necessarily always been taught, and so not knowing them, doesn't make them not worthy of your time, in the same way that being homeless doesn't make them not worthy of employment.

So, you only find out about who they are by asking questions. You only find out about what they know, and don't know, or what their experiences are, and what skills they have, by probing and forming that human connection. In terms of the second part, you asked, Stephanie, about how do you know when it's not working. It's one of the human connections that is not working, right? I mean, you know, when you're not vibing or if people are not showing up to appointments or they're shying away from some of the goals and responsibilities that you might have had for them. My first step is usually to probe and say is there something else going on in their lives that's making them act differently? If that's not the case, then maybe it's just not a relationship that's working. Maybe we don't speak the same language, and that's OK, too.

(SD) That was great. We will now hear from Dr. Libby, who will share her philosophy on the mentor and mentee relationship.

(AL) Thanks, Stephanie. I'm going to build on some of the things that both David and Tessie already brought up. They both emphasize the human connection and the way I say that is that "it's the relationship." The mentor mentee relationship is the most important asset in the mentor mentee partnership. What that means is that, as in any relationship, you might not always agree with each other. You might not like your mentor all the time. You might not like the mentee all the time, but this is a small world and a long life. It's always better to really be thinking through, "what would I do in this situation if the most important thing is our relationship? Am I going to make it easy for this other person to help me? Am I going to make it difficult? Am I going to fight my

ground on this? Are you going to trust that this person is thinking about you in the way that you want them to?"

As a point of philosophy, I agree with Tessie and David that this human connection is the most valuable thing, and I call that the relationship itself, not any one action or decision. The second, really critical, piece of my philosophy of mentorship is that the mentee is in charge. Tessie told a very beautiful story that illustrated my point exactly. When Tessie described herself as a mentor saying: How do I want to communicate with you? How are you going to know if I'm engaged? How are you going to help me do a good job for you?" in my opinion, that is the mentee's job.

So, it's up to the mentee to say: "How would you like to communicate? Would you like me to e-mail you things? Would you like to use a shared drive? Do you want me to send you calendar appointments with attachments? Will I send you an agenda?" My answer would be "Yes. Do all those things." The mentee is in charge, and here's why. The only person who knows what success is for that person is the mentee; only you know what it means for you to be successful. It might be getting the grant or it might be something quite different. The mentor is actually just a facilitator, an important facilitator, but just a facilitator of the things you describe, you define, you ask.

Now, again, Tessie's right. A mentee may be confused, struggling, need input on these things. This is the good and bad of being in charge. You're in charge. You have to say what you want to do. That's a big responsibility. You're not alone in this and yet it is up to you. You have to own your own choices. You get help from your mentors and people who care about you. The mentee has to do figure out their own values. You can do values clarification exercises if you want to be able to quickly put words to this. It's a very powerful skill to be able to tag your values, and really helps with a negotiation because who can argue about values! You need to know your goals. What are your professional goals in the short term and the long term? Otherwise, you don't know what you're working towards. The goals will change over time. They change over your life, over your career. If Dr. Abman's goal was to become a professor, then great, that is what's he been doing for the last so many years, right? We all have to evolve, and so it's up to each of us, as we chart our own career path, to be thinking through, well, what's next? What do I need to get there, and who can help? The "who can help part" is where you think through "well, gosh, I need a network of mentors, not just one magical mentor." Again, to build on what Tessie said, people have all kinds of wisdom.

You don't need to put anybody in a box, they might initially meet you because of your scientific expertise, but actually, you know a lot about all kinds of things, or you know somebody who does, right? So, when you craft your goals "this is what I'm working on. This is what I need, and who can help." That's how you do a gap analysis on yourself, and that's how you identify the help you need. My advice to you is to be strategic in meeting those needs. So, you're thinking always about yourself as a whole person.

As Dr. Abman described, I started training clinical researchers a long time ago; I'm a Ph.D. and went to school to be a researcher. Early on, I thought if we could just get everybody a grant, everything would be fine. The truth is that it's not that hard with a little bit of luck. You can teach people how to get a grant; this is a skill that can be taught and learned and mastered. What we saw quite quickly is, actually, that's when the problems began because now they have a grant, and they have to do the science plus purchase, manage, hire, fire. This requires people skills. They have to chart their career and make choices. What's the next grant? What paper are you going to write? Where are you going to present this? Do you go to a very specialized scientific session? Do you go to one society or go to the Pediatric Society, an international society? There are all these choices. So that's how I became very captivated with training others to achieve all the skills that you need to be successful to execute a plan.

If that plan is a grant, that's a set of skills, for example, but part of your plan is your career plan. So you need to execute the skills of meeting new people, engaging them in your vision, in your goals. Nothing ever ends, I mean, meeting new people, new relationships, that never ends. Relationships change; as you meet people, remember that someone may become a valued colleague, but a former mentor; I don't think everybody gets elevated to the status of current mentor. Nevertheless, those relationships are highly valuable, and they become part of your professional network, and that's forever. If you do a good job, again, you're honoring the relationship, which means you don't just forget about them once you don't need them anymore. You stay in touch with people, and you try to be supportive of them, and connect with them in a way that meets your goals.

Finally, I do want to address the idea that many people talk about. There's no one magical mentor. David had mentioned that one may look for somebody who answers this question "Who do I want to be when I grow up?" I will tell you, as a Ph.D. in a clinical department and a Vice Chair of academic affairs, there is nobody like me that I have met. So, you may not be able to find that person that you want to be, because you're breaking boundaries. That's OK. You can look for people who have qualities that you want to emulate. For example, somebody who leads well in a crisis. Right now during COVID, there are a lot of great leaders who are cracking a little bit under the pressure or great mentors who struggle when they're outside their comfort zone.

So, you target qualities to find in a mentor, and you try to find people like that, who can help you build those skills. Finally, you look for people who are like you, and quite specifically, people who are different than you. So, if I'm a Ph.D. I definitely want a MD mentor. As a woman professor, I also want men who are mentors. As a senior faculty member, I definitely want relationships with peers and with earlier career people. So, you specifically want to connect with people like you and different than you. Thank you.

(SD) Great! Can you discuss how to build these diverse mentoring teams?

(AL) Yes, definitely. It's just like you think about the goal. For example, I teach leadership training, that's how I met Dr. Abman, and one of the things, we teach is negotiation. When you prepare to negotiate, for example, we say women, talk to your female friends about what they are making, what kind of packages they ask for, but most, definitely talk to your male colleagues, because they're going to have a very different perspective, a different experience.

When I negotiated my current role in emergency medicine, I had worked out a whole plan, of course. I took it to a couple of trusted male colleagues and said "what do you think? You're going to have sticker shock." One of my good colleagues said "I think you can go a little higher" and I thought "all right, yeah!" So you really do need that perspective. People like you give you validation, they can understand some of the things that you're going through, and most definitely, you need to hear people who have a very different lived experience.

Tessie brought up minority trainees. I run a program with Dr. Judy Regensteiner, the Doris Duke Fund to Retain Clinical Scientists. Well, Judy and I are both Ph.D.s, but we definitely know how to support physician scientists, and knowing multiple perspectives help. Always think of all the things you need to do to make your life go. If you are a parent of young kids, it might be really helpful to have some mentoring from somebody who also faces that issue. At some level, you need different perspectives, too.

(SD) Thank you Anne, Tessie and David! We have several questions in the chat box. The first one I am going to ask is for David, but I would love for Anne or Tessie to also chime in.

David describes a fairly organic process of acquiring mentors. Do you think structured mentoring programs are always helpful, or do they sometimes interfere with this process?

(DC) Well, I'm glad that someone picked up on that. I'm a big believer in organic program growth. I think that when you put constraints around relationships, and you try to put people together who may not belong together, it doesn't end that well. It can be very stressful for all parties. So, I'm a real believer in this organic sort of process that evolves. That said, I think it's important for people to still understand that there are constraints around these relationships, from the standpoint of how do you pick a mentor? Who's qualified to be a mentor? From a mentor's perspective, are you really ready to be that selfless? Are you in a position where you can really offer what needs to be offered from the standpoint of maturity, scientific maturity, academic maturity? So, not everyone is ready to be a mentor. Not every advisor or friend or colleague, even those that are senior, are truly going to be a mentor.

I believe the mentor relationship is a really special one. At the risk of kind of counteracting my prior comments, I think we've sort of devalued the word mentor because if everyone's a mentor, then really no one is. What I see quite a lot of now is people who kind of claim the mantle of mentorship. Therefore, claiming the privilege of mentorship sometimes without really being able to walk the walk of mentorship. So, I think there's a huge responsibility, and I think the responsibility, comes with some meaningful expectation, and so I think you have to be very careful upon whom you are bestowing the mantle of mentorship. From that standpoint, I think that is where the boundaries of who can be a mentor is really important, as opposed to strictly speaking about the organic process. Because sometimes, I see, particularly amongst fellows, that the dynamic, junior faculty person may appeal as a mentor; however, he or she is truly not yet ready to be a mentor. Truthfully, I don't think at some level people are ready to make that distinction, so I guess that would be my answer.

(AL) Well, David, I'll agree and disagree with you. So you can't criticize me! On the one hand, of course, you're right, you meet somebody wonderful. Tessie used the word 'vibe' with you. You know, you connect. Your communication styles are in sync, it all feels very easy. That's great! However, I'm pretty goal oriented, and so, I want you to start with your mission and vision. What are your goals? What do you need to reach the goals, who's going to help? We know in career development awards, there might even be a mentoring table, where you list who is this mentor person? What are they going to do? What aim are they going to help you fill? Whether you're placed in a structured relationship, like, you're given a departmental mentor, or you're a fellow and you have a preceptor who's your identified mentor, you are never let 'off the hook.' That person can fill a role in your plan, for yourself, your mentoring table, and then back to you. Who else do you need? What are you trying to do?

And you're right, David, you know, it might not be wise for you or for the junior person to say they're going to be your primary scientific mentor; instead, they might be a half-step-ahead mentor, a peer mentor when it comes to work-life balance or a peer mentor in writing that first grant. There are many roles that peer mentors can take. Are they a mentor? The main mentor? Probably no. That mentee is defining who they need.

(DC) I think that's fair. It just depends on how rigorously you want to impose a definition of mentorship, and what that really means, I certainly will allow that there are many people that give you sage advice, that might be a mentor in one domain or another. Those people are precious indeed. But there are very few people that you will turn to for advice, guidance, counseling in multiple domains. Those people, really, to me are the real, overwhelmingly valuable career mentors. I will say too, that I think that, sometimes, people do get put together, and they don't necessarily fit together. That does make it a little bit harder, in a number of ways. I really liked how you put it, Anne, that there are mentors for different components of your job and the goals you want to get to. That can be tremendously helpful.

One thing I will say just from a non-pragmatic standpoint. I certainly didn't know what my goals were, and I think many of us really don't know our goals and won't really be able to define them explicitly. I liken it to how it used to be when you would go to the stacks in the library, you would go and look for a particular journal or book. You'd end up looking at 8 or 10 different things along the way. You'd find really great lessons, along the way, as you were trying to find the one article, and I think sometimes, we think we know what we want. We put blinders on to all the things that we might learn along the way, never having known what we really wanted or needed. I like to be careful a little bit about the structures that we put in place. Not to say that they're not really important.

(SD) That was a great discussion. This question is specific for Tessie. Can you comment on the difference between mentoring and coaching? Do they coexist within the same mentoring relationship?

(TO) They do. When I think of a coach, let's start with sports, that's probably the easiest place to see this analogy. They usually work on one particular skill, and they may work on that one particular skill with drills. With a coach, you're in the background, offering advice on how to manage. When I think of myself as a mentor, I'm in the trenches with you. Whereas a coach watches you and then tells you how to pivot and change, I think of a mentor, as someone who is sitting with you. If I'm your research mentor, I am sitting with you, teaching you, and we learn together how to do your data analysis, for example.

Whereas, when I'm a coach, I'm more as an observer. I'm watching how you navigate a certain thing, and then offering advice as to where you can pivot. It's part of the organic part that I think David was talking about, and you can be the same person and serve different roles to your mentees. I can be a sponsor to one, a coach to another, a mentor to a third, and I can be all those things to that same person at different points in their lives. They're all important roles. It depends on, again, meeting your mentee where they are and seeing what they need. If I'm realizing that you are really struggling with understanding how to do a box plot, then we're going to probably sit down and actually do that together, and that's more of a mentor–mentee relationship.

Whereas, an example of a coaching relationship would be, you're thinking about negotiating your contract, like Anne was talking about. You come to me with questions, maybe I should approach it this way versus that. I give you some tools, and you go back, and you try it again. Then I think about the sponsor as somebody who is advocating for you when you're not in the room. It's the person who talked about you, thinks about you, and puts your name up without you even knowing. So, I play those different roles for the same mentee.

(DC) I just want to jump in and underscore Tessie's answer relative to sponsorship and mentorship. I think the sponsor role is so terrifically important and so undervalued. Jeff Upperman, who's the Chief of Pediatric Surgery at Vanderbilt, really championed this definition for me and I hadn't really heard that term explained as well as he did. As Tessie just described it, someone who's championing your career path, even without your knowledge, and is putting you in a position to succeed at the national and local levels, whenever possible. That is a huge, huge advantage to people. That's why I like this idea that I think, as Anne put it, you may not have mentors all the time, but you have these people who remain in your professional network and relationships. People that think well of you that are willing to consider you when someone asks, hey, do you know someone that can write a chapter for pulmonary textbook? So, everyone needs to find a good sponsor. That might actually be a little bit harder, even, than a mentor, because it's so much less obvious. But I think it's incredibly important.

(AL) I'll build on what you both said. David, on sponsorship, actually, this goes back to Tessie's first story about the woman

who did such a great job. You Tessie, were able to, without worry, put her forward for a position. That was you sponsoring her, and she made it easier for you to serve as a sponsor, because she did something that proved she would be a good risk. As a sponsor, you're putting your reputation on the line. So, you know, you're right, David, there are fewer sponsors than mentors, because a sponsor has some level of influence, right? You are in the "room where it happens" and you can put somebody forward. So, generally, they're higher in the organization than you, whether it's local or national.

I liked what you said, Tessie, about coaching, in the sense that any mentor can coach, it's a skill. You could call it a role at times. The way I think about a mentoring situation is that the mentor is going to open their brain to you. They're going to think out loud and sort of teach while they are sharing their knowledge with you. In contrast, a coach actually assumes that you have the answer. That's the hallmark of a coaching relationship is that an executive coach doesn't even need to be in your business. They don't need to know anything about your day job. They are listening, they're thinking partners, and they talk to you, ask you deep questions, to help you uncover what the answer is that only you can know. Your mentor can do this also.

The trick is, mentors know you and care about you, and they're very tempted to assume that they know the answer. It requires safety to ask and safety to listen and let somebody tell you that their goals have changed. I agree with you both, I just wanted to build on those comments,

(SD) Thank you for sharing great examples and definitions of sponsorship, coaching, and mentorship. Tessie, as mentors, what steps do we take to better understand how to be an effective mentor for those underrepresented in medicine, whose experience of underrepresentation you don't personally share?

(TO) That's a really good question, and it's a position that I'm not in often as far as racial minorities. But I will say that I'm in that position when thinking about some of our LGBTQ residents and fellows, when they rotate on the wards. It's the same sort of skills that you use to learn about things you don't know; these are the same skills you need to use here, which is asking questions, figuring out who they are as people, what they value, but also, spending time learning, what some of their barriers and struggles are, and seeing those struggles through their eyes. It's all about being empathetic, and I think it was something that Anne said, you're not going to find mentees that look like you all the time, right? If you look at underrepresented minorities in medicine, if you look at black people in particular, we represent, 13% of the population, but still only 5% are in medical training. The further and further you go up, in terms of getting to the level of professor, the fewer and fewer people you'll find, who look like you. So, the likelihood is that non-minorities are going to be mentoring and sponsoring minority mentees. It's your job as a mentor, to try to figure out who they are as people, but also to understand their struggles. I would say that is something that I highlighted in the story about working at the homeless shelter and that understanding impacts how they interacted and interfaced with the world. It's a matter of just seeing them as human.

(AL) I am just going to build on this. When we teach leadership training, one of the hallmark skills of leadership, as with mentoring, is self-knowledge. For example, why, when you hear a mentee say something, does it land on you in a certain way? Tessie just said everybody has lived different experiences. Yet, one of the most important things to be able to communicate across experiences is to be able to put words to it and reflect on it. How does that come out, both in how you hear things, or express things? So, all people can examine their differences, their biases, just to be a better leader of others, and for themselves, to be able to describe in words, what is that perspective, and ultimately build your own cultural competence, so to speak.

(SD) What do you do if the mentee doesn't seem to take responsibility for their own outcomes?

(DC) It's really hard to rescue somebody that doesn't want to be rescued. It's very hard, and this isn't a career path that is for everybody. There are a lot of people that walk down this path without full knowledge, and also recognize somewhere along the path that they don't want to keep walking anymore. I think having an honest conversation about realistic expectations and underpinnings of the lack of accomplishment or the unwillingness to meet milestones or goals is important. Usually that's very clarifying. I think it is important to have that conversation without any animus, without any kind of heat. Usually, in my experience, not that it's been very often, but in my experience, it comes as a relief to people to recognize that they're not fooling anyone. The lack of desire and their lack of fire in the belly as it were, is apparent, and they can move off into another arena. That said, it's important to finish projects. It's important not to waste resources.

Actually, I often will step up my game, do perhaps more than I ought to do in order to finish that manuscript, or that abstract or that chapter. Because I think it's really important to finish, much of the time resources are coming from other people or from other granting agencies. I feel a fiduciary responsibility to get the work done, and in a very strange way, that leaves everyone feeling much more whole.

I've yet to ever take away first authorship from somebody, or to push them away from a project, because I feel like the harm of doing that is significant. Again, I want to preserve that relationship. Unless somebody is clearly virtually pathologic, I'll continue to work with them, to get them to a place that they want to get to, even if it's not where I had anticipated the relationship.

(TO) I have to agree that a lot of times, the stakes are just too high to give up on the project. So, my research staff who have been helping to collect the data, or the families that we've approached for consent, all of that is important to me, and if this person can't necessarily take it to the finish line, I'll have that open, honest conversation. Like David suggested, asking the mentee what's up? Tell me what's going on, because truthfully, there might be something else going on in their life that's prohibiting them from getting this work done. I also ask myself, is it out of character for this person? Have I seen a pattern? If I've noticed that this has been a constant issue, where every deadline I have to send a reminder, that's a very different thing than the person who has always been, meeting the deadlines and then all of a sudden falls off in terms of my investment in trying to help them get to the finish line versus just doing it myself. Because ultimately, if we're talking about a paper, it's all the other investments that make it so important for me to make sure that the work gets done. I also think that if I started on the project, then I thought that the work was important. So, we're not going to abandon it. We're going to get it done.

I will say that it will change my relationship with the mentee, in terms of future projects, and future sponsorship, and the ability to sign on for other things. So, you've got to weigh the risks and benefits of not following through. I often do set it up so that the mentee knows the metrics. We talk about what first authorship means, and what it takes to actually claim first authorship. We talk about what our enrollment strategy is. We meet on a regular basis. I would say in my career, I've only fired one mentee who just could, no matter what, she just couldn't do it. So it's definitely rare. It was a project that we ended up finishing without her.

(AL) Yes, we have all been there. I'll just build on what David and Tessie said. To coin a phrase from my chair, I like to be what he calls, shockingly candid. You can be just as gentle as you want to be and yet say the truth, speak the truth, without judgement. Now, that being said, I definitely think there's sort of a role for being a manager, and managing performance, and getting things done based on an agreement. Then, separate is this mentoring relationship, the cultivation of an educational relationship,

building the next generation, and all this jazz. When you're talking about sponsored projects and executing a scope of work, then we're in management mode.

I do think it's your role and responsibility, as if you would have a coaching conversation with a mentee. You might say, hey, guess what? We're going to just stop for a minute, change the way we talk, because this is my goal for this conversation. In the same way, I would say a highly effective mentor might say, hey, I want to talk about your career and your future, and in this moment, we're going to have a conversation about our deadlines. As Tessie brought up metrics, which are too often, missing. It's a lack of management skills on the mentor's part, and a lack of really taking responsibility for yourself as a mentee.

For example, I've heard PI's say, "I'd like you to take the lead on that. We need to get this paper done. We need a draft. We need whatever." I promise you, there are plenty of people who won't hear that as a directive with a timeline. So my first instinct, almost always, when somebody says this person just isn't meeting my expectations, that they're not being accountable, I think, "what do they really think they're supposed to be doing? Do they really understand exactly what you want them to do?" Back to my earlier point, the mentee is in charge. You mentees manage up.

So if you want this to go well, you want to impress Dr. October that you're going to be the greatest mentee she's ever worked with. You're going to say, "Dr. October, you want me to be first author? I've got this table with timelines. Let's review this. This is exactly what I want to deliver for you on each day, on time, with excellence." So, if she doesn't do that for you, that will never stop you from doing it.

(TO) Anne and David, how would you mentor a mentee who has the reverse problem, a mentor who's not delivering? What advice do you give them?

(AL) A mentor who is not delivering. I mean, that's also highly common, right? It's to some extent, to David's earlier comment about this lifelong relationship. Here's an example. Some people may be there for you for a time period, and now their life has changed, or they focused on a different line of research. That's what they used to work on, and now they're just not that into it. They don't have the heart to say it to you. So they're going to sort of be passive aggressive, not aggressive, but passive about it. So, they will be slow to respond, or they'll miss your deadlines, and that's not helping you. Sometimes, I think the mentee has to pursue the conversation. What can I expect from you? Maybe you might be happy with a pat on the back once in a while and you just bounce some ideas off the mentor, but we won't really have deadlines together? You want to make it OK, you're going to facilitate a strong relationship. Make it OK for people to change the way they engage with you. If you can, let them save face and move on. Sometimes the best thing you get out of a mentor is that they're not your mentor anymore. We may all have that happen. Always, the goal is to never burn a bridge, let it end well. Never leave somebody hanging. It is a small world, and make it OK, and try to make it about you. "It's not you, it's me, I'm into this other academic interest right now." That's OK. I mean, your ego can handle it, just makes sure the relationship ends happily and move on.

(DC) I just want to emphasize Anne's point about never burning a bridge from the standpoint of the rooms are small, life is long, make sure that you don't make any enemies along the way, if at all possible. I think a scenario that we haven't addressed, is, sort of tangential, but very related to this whole issue, is what do you do when there's a mentor who is perhaps a professional rival, or is unwilling to recognize your work as independent? You have to differentiate yourself and I think that is a really fraught situation that requires a lot of very careful thinking. Honestly that's something, that despite my talk about being non-pragmatic and being organic, I think merits a lot of pragmatism, early on and conversations early on so that you can delineate your ownership

of the data and where your career is going to go. Those conversations, I think, are best done early and often so that people recognize how to move forward. This is not just somebody who is completely dependent on the mentor, but an investigator with an independent research trajectory and thoughts.

Some of that really comes down to where you're publishing and whose lab it is in. But those are conversations that are best explicitly held as early as possible, even thinking about what research project, you're going to delve into and turning it into your own. Most good mentors are going to recognize the need for people to differentiate and will actually even provide a path forward that perhaps even the mentee might not even recognize.

(SD) Do you actually formally sit down, when you're starting this relationship, and set out expectations?

(AL) Absolutely. I mean, it's fun, setting expectations. Well, what can you expect from me as the mentor? As the mentee, what do you expect from me? I want to be great. I want to be your top 1%. Here's what I hope and expect from you. Let's make sure we're on the same page, right? You know my ideal model might be that I want to see you every week, and you think, "oh, my gosh, I've got 50 mentees once a month. That's going to be a heavy lift for me." OK, we have to have that conversation; and again, it can change over time, but it's a joint expectation setting. If the mentor doesn't invite you to have that conversation, guess what? Back to you. You invite them to have the conversation, for sure.

(TO) It's essential, definitely, at the beginning of a relationship to lay out exactly what our expectations are. Otherwise, we can be thinking about two very different outcomes. I think, like Anne said, it changes over time. For example, when there's finite projects like, data collection, versus thinking about some of your long-term relationships with your mentees. What happens when you meet those metrics, early? Do we then come up with new outcomes, or is the relationship, you know, over? All of that depends on what you set out from the beginning and your constant discussions about it.

(AL) To build on that, the other thing is that you get very specific and very concrete. So, you might say, like David says, "we're going to collaborate, and you're going to have one of your own projects, OK?" Well, what does that mean? Will you be senior author on every paper, no matter what? Or will we determine authorship one manuscript at a time? If you're very close in age and stage, you might think "well to be fair, we both need to PI. We both need to be first or senior. So, are we going to take turns? How will we determine that?" If we say, "oh, yeah, we're going to share credit," we might say we agree that we'll share credit, but the operationalization of that may be worlds apart. That's how you get down a path where you both were on the same page, and then, suddenly, you're not aligned. You're assuming that they have the same ideas about things as you, without saying it or writing it down.

(SD) How do you advise a mentee that is receiving opposite advice from two respected mentors?

(AL) I first say, congratulations! This is a good problem. You've engaged good people in your goals, and they care about you. So, first, we celebrate the fact that you're so successful that you have multiple people weighing in. Then, I remind them that it's ultimately their choice. This is like when you write in a career development plan, what is your plan for arbitrating differences of opinion in your mentorship team? That's also good. You practice those skills of managing. If you did a Ph.D., at some point, you got a thesis committee together. I promise you, they didn't all think the same thing, but they all have to agree. So you practice the skills of bridging differences and then make your own decision. Maybe that's always in the direction championed by the primary scientific mentor or your career mentor.

(TO) I'll add that it depends on where you are in your career, as to how much you can just say, I have these two opinions, and I'll decide. When I was very junior, I went to my senior mentor, to say,

OK. I'm hearing these other things, what do you think? So, in some ways, I needed to have her authority to help me decide between things. As you develop in your career, you can start making a lot more of those decisions on your own. But early on, I used my senior mentor all the time to block for me, for example when I was doing more clinical service than I was supposed to. You use your senior mentor for those kinds of disputes, for advocating on your behalf when you are pretty junior and not in a position to advocate for yourself. I would say, that it is ultimately your decision, which path you go down. But the earlier in your career, do lean on people who have expertise. You chose them for your mentor for that reason, to be able to help you when your knowledge base may not be as strong.

(DC) I'd just like to add one additional point, which is, while we are talking in the abstract about mentorship, it can seem that mentors are selfless and without any self-interest in that conversation. That in my experience, is rarely the case. So it's important for you as the mentee to try and discern what the vantage point might be. So sometimes there's merely a difference of opinion that motivates these divergent perspectives where you're getting contradictory advice. Sometimes there's something that's a little bit more asymmetric that's motivating these differences. I think it's really important for the mentee to have a sense of where everything's coming from. Honest scientific differences are fine, and will make good sense. Sometimes, however, as Tessie pointed out, there may be conflicts of interest embedded in the relationship. For example, if you've got a division chief that's one of your mentors, who wants you to do more clinical time suggesting that since you are early in your career, you need the additional clinical time in order to gain more expertise, to be comfortable. Well, in whose best interest is that perspective? So, just be careful that you recognize the particular perspective of people providing the sage advice.

(AL) On that, David, I was just thinking, to some extent, everybody's in conflict (of interest), so to speak. You know what I mean? If I'm your chief, then I'm investing in you, I want you to be successful, and I have to cover clinic, and the money or cost is real. It costs me a lot of money to protect your research time. All of those things are true so it doesn't make it obvious what your choice, decision, or bias would be. I will say, David, that honest scientific differences of opinion can be some of the most heated discussions. People can get quite bent out of shape over what they think. Easy differences are easy. It's a life skill to be able to manage differences of opinion and find a way forward, because, it's back to you ultimately, anyway.

(SD) Young faculty can certainly feel stressed, uncertain, or anxious about their academic career. This can erode into the mentor–mentee, relationship. How do we identify this issue, respond and move forward in these settings? How do we help young faculty build resilience and not let it erode the relationship?

(DC) As was told to me by a very notable perinatal physiologist, Giacomo Mescia, success is 5% good luck, 5% intelligence and hard work and 90% just being able to take it. I still think that's true. It's not very unusual at an early career stage to have multiple awards triaged, papers rejected. So, I think being a cheerleader is really important. Also, I think it's really important to highlight the positive components of any work that is forthcoming and those successes. I think it's also really important to be able to share your own personal failures, so that people recognize that no one's path has been completely rosy. Everyone has had difficulties along the way, and whatever difficulty you have at the moment, it just seems like the most ponderous problem to solve. But, ultimately, perseverance is really what matters. I think most people really recognize that when you take a moment to pause.

(TO) I also think, David, this is where peer mentorship comes in. Mentors have seen a lot of successes and we often are in these silos where, you're in your lab, you're the one person in your lab who's struggling. Everybody else in your lab seems to be thriving. But that's the case in labs all over the country. It's when you hear the stories of other people who are exactly at your same space, you realize, OK, I actually am a superstar. I've already surpassed where most people would have already ended, as I've submitted two grants. Lots of people stop at their first. A lot of faculty get stuck between the K to the R transition, and it's like there's a lot of faculty who never receive a K. You are already at the top, but you can't see it when you're in your silo. This is where peer mentorship really helps, and it's your job as the mentor to sometimes help them find other people who have these shared experiences so they can get a reset of what's normal.

(AL) That's a great example, Tessie, I think it's normalizing the struggles. That's what we do when we run large mentoring training programs. We get in a room with 50 people from different types of labs on campus, and you think you're the only one that's getting rejected. You think you're the only one who hates reviewer two, or who has two mentors who disagree with the next experiment or whatever. You know, a lot of it is the impression that "I'm not the only one experiencing this. Oh, this is part of life." Rejection is part of the job. So, this helps a lot. Then of course, looking at your peers, especially like when we have a longitudinal program, a two-year program, and you have young faculty members watching each other get rejected, watching each other respond to the rejection, and go back and ultimately succeed. It normalizes and builds mastery. That is if they still want to do it. That's what David brought up. You at some point, may decide, "Wait a minute. I didn't sign on for a regular dose of criticism, and this is really hard." It's interesting because physicians train at the bedside, and they are used to being verbally criticized. It's very interesting, with Ph.D.s, it is quite the opposite. Ph.D.s are used to their writing getting ripped apart. If you critique my words, I don't like it, but I have experience with this, whereas physicians can take it quite hard. If their grants get rejected, it might feel like "I'm no good, my ideas are no good. Maybe I shouldn't be doing this." It's just what you've learned, and it takes time to build the skills. I think the mentor can always be a safe harbor. Sometimes it's just making it OK to feel down and discussing what's next. This too shall pass. You know, "if you want to do it, I'm here with you."

(DC) I think for the physician scientist, it's a particular problem, because the physician has now gained a high level of confidence in the clinical arena. The physician is an authority clinically and really doesn't make many mistakes at all. If they do make mistakes clinically, they're very profound, and it's quite grueling in many ways, but generally they perform at an incredibly high level, and have a lot of confidence from a lot of people. It is difficult to then go into the laboratory setting, to write a grant and to be infantilized, once again from a scientific standpoint. It's a very big contrast, so I think that's something that we really need to be aware of, relative to the physician scientist group.

(SD) I have learned so much from all three of you. Thank you Anne, David, and Tessie. We have received several terrific comments. Your wisdom and insights have been outstanding. Unfortunately, we are not going to be able to get to every question. I'm going to turn this over to my wonderful colleague, Dr. Abman.

(SA) On behalf of the APS, SPR, and our attendees, I would like to thank Tessie, David, Anne, and Stephanie for a wonderful and insightful discussion.