After Hours Conversation - Mentoring – NIH and the National Research Mentoring Network (NRMN)

Ericka Boone: Good evening, everyone. Thank you for joining us for tonight's wrap-up of the After Hours panel discussions. We've had discussions this week on diversifying the research workforce, the next generation research initiative, and tonight's session is a conversation about mentoring with the National Mentoring Research Network and the National Institutes of Health. So let us welcome tonight's panelists. And let me know if the slide has advanced. Someone put in the chat, "Yes, I see the panelists on the screen, the panelists' pictures," because I've been having a little bit of a problem here and there with my screens advancing. All right. Thank you. Thank you all so much. Oh, Molly, I'm taking you everywhere with me. Thank you so much. All righty. So first up we are joined by Alison Gammie with the National Institute for General Medical Sciences. We're also joined by Mercedes Rubio from the National Center for Advancing Translational Sciences, Nicole Redmond with the National Heart Lung and Blood Institute, and Christine Pfund from the National Research Mentoring Network. My name is Ericka Boone, and I will serve as tonight's moderator. All righty. So these are tonight's session goals. So mentoring has been shown to be critical for the advancement of biomedical researchers. And in this session, you're going to hear a lot more about national efforts to advance the science of mentorship, the importance of mentorship, mentorship across the career stages. So this session is going to help mentors and mentees to improve their practice and expand their mentoring networks and advance their careers, okay? Upon the completion of this session, you as participants will understand how to identify your mentoring needs and expand your network to meet those needs, read about evidence-based approaches to mentoring, and use resources at the National Research Mentoring Network and other mentoring sites. Okay? So now, we're going to go ahead and get down to the juicy stuff. But first, this is our plan. We're going to ... We already had our introduction of our panelists. We're going to talk about the science of effective mentoring, how to cultivate your mentoring networks, creating a mentoring culture, and then we're going to discuss resources, and we're going to allow time for you guys to ask your interesting questions, okay? So this is one of our resources for effective mentorship. But I'm sorry. First up, we're going to have Chris Pfund from the National Research Mentoring Network.

Christine Pfund: Great, thanks so much, Ericka, and to the other panelists and for the opportunity to meet with all of you today during this After Hours session. So we thought we wanted to start off, as Ericka said, this focus of this panel is going to be on mentorship, but what do we mean by mentorship? And so one of the things that has come out in the last year, which we would like to highlight, is a National Academies report on the science of effective mentorship in STEMM, and that extra M is for medicine. So, science, technology, engineering, math, and medicine. And I had the honor of being one of the members of this consensus committee, and one of the things we really struggled with was, "What is mentorship? What is mentoring?" This is a term that gets used very ubiquitously, and it means lots of different things to lots of people. So it seemed fitting that if we were going to have a session on mentorship that we would define it. So what this consensus report and the committee came up with was the following definition of mentorship. Next slide, please. So we defined mentorship as a professional working alliance in which individuals work together over time to support both the personal and professional growth, development, and success of the relational partners. So both the mentor and the mentee, through both the provision of career and psychosocial support. So a couple things I want to point out from this definition. First, the committee really moved away form the term mentoring and embraced mentorship. And the reason we made that distinction was because when we talk about mentoring, it seems to put all of the focus on mentor. And as we all know that in any classic diadic relationship, it's really important that both mentor and mentee play critical roles in the development of that relationship and the success of that relationship. Mentorship honors the fact that it's not just about one member of a classic dyad, but it's about all members of a mentoring dyad, a mentoring group, and that they are all part of a working alliance together. We also really wanted to highlight what the literature had shown, that mentorship really includes both a focus on those career support functions, so career guidance, that skill development, that sponsorship, but also to highlight it's equally important that the relationships focus on psychosocial support. That's the emotional support, the role modeling. And both of those elements have been shown to be really important for mentee talent development. Now, you might say, "Well, what's the difference between mentorship and other developmental processes, like teaching and coaching?" All of those collectively support the development of knowledge and skills for mentee development, but really we're thinking about that holistic development of STEMM professionals, including the STEMM identity development. And those collectively all play a role in mentorship. And so we don't want people to get really mired down in what specific definitions, but more about mentorship as a holistic approach. Now, when we talk about mentorship, some of the critical elements that the literature supports are things that probably won't surprise you based on your own experience as a mentor, as a mentee, as someone running mentoring programs, and that's on the next slide. So those mentorship elements include trust. So trust develops really when mentors and mentees work together to identify and respond to mutually developed goals, needs, and priorities, and they change over time. Self-reflection is a critical element for mentors and mentees to make their relationship effective. Expectations, declaring those expectations, identifying them, and sharing them and aligning them is critical to effective relationships. And then education, that mentorship is not just something we all know how to do. Mentorship is a learned skill that mentors and mentees can learn through mentorship education, and we'll talk a little bit more about that. And that education can influence the skills, the attitudes, the self-efficacy of the behaviors of mentors and mentees. So on the next slide, I want to just say that mentors and mentees play lots of roles in relationships. There's lots of attributes or roles for effective mentoring relationships. And those occur in a lot of different domains. And one framework that we like to think about is that there are skills that we need in the research domain. And this is probably the one we talk about the most in mentoring relationships is how we engage and learn mentorship and how it helps research. But there's important elements in the interpersonal domain, in the psychosocial domain, in the cultural diversity domain, and in the sponsorship domain. And not all mentors need to play all of these roles for mentees, and not all mentees need all these roles served at any given time. And that's really important to think about as we think about mentors and mentees and how they can be part of networks to support talent development. And this is an important thing that we're going to hear more from from Nicole. So I am going to turn off my video here, and pass it on.

Nicole Redmond: Thank you very much. Next slide. Next slide, please.

Ericka Boone: All righty. This is where I've been having a little bit of an issue with sharing my slide. So I can see the Cultivating Mentoring Networks, but you cannot, correct?

Nicole Redmond: I cannot, yeah. It's still on the last Attributes slide.

Ericka Boone: All righty. I'm going to stop sharing slide for a second and then I'm going to reshare, okay?

Nicole Redmond: Okay.

Ericka Boone: You guys bear with us.

Nicole Redmond: Meanwhile, I'll go ahead and just mention and reiterate the point that Chris just made about the various types of relationships that you could have in your mentor network. And for those of you who attended my earlier 2:00 session, we talked about that notion of network diversity, and so I think I'd like to reiterate that point.

Ericka Boone: Can you see now?

Nicole Redmond: It says it started. I'm still on the black screen like it's waiting.

Ericka Boone: Sometimes I think that these slides ... This system is just a hater. It hates me. So let's try it one more time. We will try to share one more time. This is not the time that you want to sweat, in front of hundreds of people, right?

Vfairs: If you want, you can send me the slideshow and I'll present it.

Ericka Boone: I will try my best to do that. How about I try it one more time?

Vfairs: Okay.

Christine Pfund: Ericka, I can also share from my screen. This is Chris.

Ericka Boone: All right. What do you guys see right now?

Vfairs: Nothing yet. It's asking us to double-click to enter fullscreen mode for some odd reason. Hold on 1 second. Let's try having someone else share.

Ericka Boone: I will do that, so let me get out of this.

Vfairs: You're good.

Christine Pfund: I have it up. Let me give it a whirl.

Vfairs: Yup, go ahead.

Ericka Boone: All righty.

Christine Pfund: One second. Here we go. Let's see if I have any more luck.

Ericka Boone: Teamwork always makes the dream work.

Vfairs: There we go.

Nicole Redmond: Ah, there we are. All right. Thank you.

Christine Pfund: Of course.

Nicole Redmond: So to pick up where we left off. We were talking about the diversity in your network and that there might be multiple structures for this development, so this is important for you as a mentee, but also for mentors as you engage with your mentee about who else might be involved with their development. So typically, we think of the typical dyad of a mentor and mentee, or there could be triads where a mentee is interacting with multiple mentors, or a mentor is interacting with multiple mentees. And I think it's important here to see that even the mentees can interact with each other for a peer mentoring relationship. We could also have more of a collective or group, and that might be something you'll see in, say, a T32 research program, for example, where everyone is a part of the same collective program with shared faculty. And then a broader network, and this might be something you see within your department or division. Here we also highlight the various roles where someone may act as a sponsor, and we can talk a little more about that in terms of a sponsor being someone that identifies opportunities for you. A lot of times that might be your division leader or director, a coach. Typically, that's defined as someone who's really focused on helping you with a specific skill, so, for example, writing a manuscript or helping you practice your talk. And then mentors, who tend to have the more interpersonal relationship and are looking at the 30,000-foot view of your career. And as I mentioned, even your peers because they might have a different background or expertise, and you're able to engage and teach each other. Next slide. And I mentioned again that there's multiple types of advisors. And I think this dovetails nicely with the different roles that Chris mentioned early in her slide, that the navigator is one, typically someone in your organization who could help you understand organizational dynamics and know who does what, who has what information, who has what influence and power, and so that's a very important person to have in your network. Again, the sponsor, typically someone more senior who has access to resources and can identify opportunities that are needed for you to advance. Coach, again, is someone that is focused on helping you develop skills and methods and increase your knowledge in an area. And then, of course, a confidant is someone that can provide emotional support. And you can have one person serve multiple roles, but more often than not, you have a network of individuals that cover each one of these roles. Next slide. So one thing I like for people to do is to be very intentional and thoughtful about what their network looks like. And so there's a few resources here cited, and there's some others that I mentioned in the talk that I gave earlier today about actually mapping out your network. So if you were this individual, this purple circle in the middle, mentee, really thinking about who you have around you in your developmental network and what roles they're playing. And more importantly, identify any gaps. So for example, you might be involved in a certain research area and have a gap in methods expertise, and so you really need to seek out a mentor or someone to coach you for that very specific thing. And there's some strategies that you can employ to identify who that person is and invite them into your mentoring network. Next slide. I think this is where I will turn it over to my colleague Mercedes to talk a little more about what institutions can do to help develop a mentoring culture.

Mercedes Rubio: Thank you, Nicole. And thank you all for joining us this evening. In terms of creating a culture and cultivating this effective mentorship, there are multiple places that this could take place. And certainly, your institutional leadership should support policies and procedures and other infrastructure that allows mentees to engage in mentoring relationships with a host of individuals - certainly inside of your home department and your program, but also across departments and schools and even peers' activities, as well as engaging with professional societies. And some professional societies have offered a lot of opportunities for mentorship to take place. And there's ways for you to consider being plugged in. For example, there are membership sections. So if I'm a sociologist by training, a medical sociologist, and I would go to the mental health section where even in that section there would be very senior people who would be interested in mentoring, and provide, perhaps, more along the ways of providing scientific mentorship. But in there, there would be other people that could serve as advisors or a professional coach, so there are those opportunities within professional societies. You can find folks, for example, who are the committee members that study the status of, say, women in the profession. And individuals who tend to volunteer for this committee tend to be the ones that are overly taxed in these spaces, but they are typically the ones that are very committed to this concept effort. So finding out who's serving on those committees could serve as a wonderful opportunity for you to think about your network diversity and the mentorship you are also looking for. Foundations - thank you for moving onto the next slide - are also a great place that are thinking and working in this space. You think about the Ford Foundation that allows for individuals to meet other cohorts that have been part of this prestigious award. Recently, I was part of Doris Duke Charitable Foundation and for us to have folks think about mentoring, and that was a wonderful opportunity because then they got access to people like me, and I got access to other individuals that are also thinking about these efforts. You think about the Robert Wood Johnson Foundation, some of the things that they're doing. And even places or associations like the Alzheimer's Association, who also has grant-making abilities, they have partnered with the National Institute of Aging Butler-William Scholars Program to be a place where folks go and extend their network. I know Ericka and I have spoken in that venue as well, as ways to have access to additional mentorship. And I think this brings on to Dr. Gammie as the next presenter.

Alison Gammie: Thank you. All right. So now I'm going to tell you about some resources that are available to you, and I may be going through pretty quickly, but don't worry. We'll make sure that the slide decks are available for you.

Ericka Boone: We're doing great on time.

Alison Gammie: What's that?

Ericka Boone: We're doing great on time.

Alison Gammie: Okay, wonderful! Great, okay. So the first that I want to tell you about are some of the resources that were developed from the first phase of the National Research Mentoring Network. And so we're in the second phase now, but the first phase for the first 5 years they developed a lot of resources, so they expanded, enhanced, and studied ways to optimize research mentoring relationships. And you can see a large number of resources that are available here. Just a few have been identified. And then next slide, please. Another place that you can learn more, as was mentioned earlier, this important study that came out of the National Academies. You can read the report and the references there, but you can also use an online guide that is available. And if we can have the next slide. It will take you deep into it and give you some various resources including, it's highlighted here, some mentoring tools. Next slide, please. And you can see as you drill in, although it's a little bit hard to read, there's a lot of really fantastic resources there that can really help institutions that are trying to stand up mentoring programs, and really learn about the evidence-based practices. Next slide, please. Another fantastic resource is the Center for the Improvement of Mentored Experiences in Research, or CIMER, and Chris Pfund is, I believe, the director of this. Anyway, it's a wonderful resource for the community, and please check out the website. They have a lot of fantastic opportunities there. So then, for the next few slides, very quickly, we want to look at resources to support mentees and institutions in enhancing mentorship. Next slide, please. So the National Research Mentoring Network has a lot of resources on their web page. So there's ... It's currently run by a resource center core, and they have a huge number of resources available. So you can go in, drill in, and take advantage of this full range of resources. Next slide, please. They also have nice webinars to help you get started on the various NRMN network components. Next slide, please. Also how to leverage the NRMN network. This is sort of part two of the previous. They show you the various things that you can do to expand your network, ways you can engage in mentoring, either one-on-one guided virtual mentoring or self-structured mentoring. You can create your own group, and you can create your own cohort and to collect data and aggregate data. So there's a number of really fantastic resources there. Next slide, please. Another important component of the first phase of the National Research Mentoring Network was grant writing coaching programs, and you can see here, although it's kind of hard to read, but you see there were a large number of different programs. They were of different duration lengths, different types of formats. Next slide, please. And you can see some of the statistics here of the various six programs. They had over 500 participants, resulted in nearly 300 NIH submissions, 93 awards, 68 percent to underrepresented minorities, and 71 percent to women. Let's see, sorry. So that equals a total of 152 awards or $65 million. So it's a highly successful program. Next slide, please. But one of the things that we wanted to do for the second phase was to really understand what sorts of things were contributing to the success. So for phase two launched research initiatives to try to really drill down to the science of mentoring. And there are a number of these studies that are ongoing. There are 11 funded different ones, but included among them are some grant-writing studies. There's two that I'm showing you here: the Utah Grant Writing Coaching Group and the Morehouse School of Medicine Grant Writing Group. Next slide, please. So if you're interested in being a study participant, you can look into this study, and if you have any questions, you can contact the person on the slide mentioned here if you're interested in being a participant. Next slide, please. The same is true for the Utah Grantwriting Coaching Program. Again, the reference is found at the bottom. So I think that should be it. Just to acknowledge that the National Research Mentoring Network was funded in the first phase through a U54 mechanism, and then the second phase, we have a resource center and a coordination center along with the 11 research awards that I was telling you about. So that's it for our presentation, and I'll turn it back to Ericka.

Ericka Boone: Well, actually, Alison, it's time for Q and A, but this was one of the first questions that came up, for us to better clarify the relationship between NIH and NRMN.

Alison Gammie: Sure. Yeah, that's ...

Ericka Boone: That's not me. In the background, it's the dog. It's not me. Just ignore that.

Alison Gammie: That's no problem. Yeah, that's a great question. So the National Research Mentoring Network was part of a Common Fund initiative, which means it's a trans-NIH-funded initiative. It was one component of the Diversity Program Consortium, and the idea was to really set up a national, as the name suggests, a national resource for mentoring so that you can pull people together across the country. And the first phase had a combination of resources and services. And there was ... They were doing, initiating research projects. But the second phase to continue the resources that are available through the resource center, but to really focus on the science of mentoring and networking through these research grants, and then Chris Pfund runs the coordination center for that to coordinate the 11 studies to make sure that we really amplify the message and collect data, for example, in a uniform way so that we can really add to the evidence base for mentoring and networking. So it's ... Our role as NIH is that these are cooperative agreements, so there's a lot of close interaction between NIH officials and the PIs of the grants. So it's a kind of much more hands on than the typical grant where you give the award and then there's monitoring of the grant. This is much more active engagement with NIH.

Ericka Boone: Great. And this question is for all of the panelists, and this one has come up earlier today, and it's coming up now. How do I find a mentor? Don't everybody jump in at once.

Nicole Redmond: Yes, now, I'll start. And so, again, I'll dovetail from some of my remarks from our earlier presentation. I think it first starts with you. So you need to do a self-assessment to determine what your mentoring need is, so what are you actually in need of and what your ask will be. So that's one. And then once you've figured that out, you know, maybe you need some general career advice. Maybe you need some specific expertise, like, say, qualitative methods. And so I think you have to start there with what is it your need is. The other thing to do is ... There's a few ways you could do it starting it within your institution, looking in your division. So you already have a network, whether that's your peers or your division leader, faculty, and simply ask them, "Hey, I have this need. Do you have recommendations?" And so that's one way to do it. The other way is, I always like a good web search or PubMed search, and who is writing or publishing in this area, and looking at who that is. And you might say, "Oh, this person is actually at my university, but in a different division." And so then that's when you could say, "I read with great interest your paper on X, Y, Z. I have this need." And it might be that you're asking them for a specific, well-circumscribed question and answer. And that might then, after you get that, you could actually ask explicitly, "Would you like to be involved in a more ongoing basis," and actually describe what that basis is very explicitly: involvement on my dissertation committee, involvement in this manuscript, and so that way they get a sense of what level of commitment they have. And then be prepared for a, "No, I can't, but," and typically people will offer you an alternative. "I'm not available to be on your committee. However, I have a colleague who has a similar expertise," or, "I'm happy to still read a paper," or they'll give you some other advice. And so I think it's about starting that conversation and not thinking it's a yes/no, but it's really an information gathering. But you have to start with what you need and really have a good handle on what you think that is.

Ericka Boone: So do these recommendations work if you're looking for a mentor at your institute as well as virtually? And what about for people who are a little bit more of an introvert?

Nicole Redmond: Yes.

Ericka Boone: Dr. Redmond, you sound like you're really an extrovert and that you would really be willing to jump out there and say, "Hey, I need help, Dr. Pfund. Would you be willing to do blah, blah, blah?" But how can you really get the gumption to go do this when you're kind of an introvert?

Nicole Redmond: Yeah, yeah, and I think the ... Well, the nice thing with virtual is actually making things really equitable.

Ericka Boone: I think so.

Nicole Redmond: No one is in person, so everyone is having to communicate via e-mail and phone. So I think that actually lowers the bar, and then some of us can even turn our cameras off. So if you've got some concerns about how you present ... So I actually think the virtual environment is one that you can take advantage of when reaching out to people that are more senior or that you don't know very well. So I think it's great introverts.

Mercedes Rubio: And you can send an e-mail and see if you can join some of the virtual labs.

Nicole Redmond: Right, right.

Mercedes Rubio: As a softer way, as an introvert, sometimes, myself, could be a way you can say, "Hi, my name is. I've read that wonderful article. Can I start joining your lab, your virtual lab meetings?" Some people are saying yes, and your network is getting expanded because this is the nice thing of all of us being on Zoom is that you can invite yourself in places before that you couldn't because you had to be there in person.

Ericka Boone: So on the flip side of this, how do you interact with people to introduce them to mentors, insert yourself kind of into their world. Or how do you seek out a mentee?

Nicole Redmond: And I think you brought up one of the strategies I was going to mention for introverts, so I think that it's bi-directional. And sometimes you already are in a network, whether you really realize it or not. You already have classmates. You already have co-faculty members, and that's the place to start. So if I were looking for a student, I would ask my faculty members, "Do you know any students?" And "Oh, yeah, I taught a class last semester, and there was a really sharp person, and I know that y'all would get along really well." Similarly, "Hey, Professor So-and-so, I really enjoyed your class last semester, and I'm interested in getting some more experience. Can you give me some ideas?" So start where you are. And that's part of what the networking is, is starting with who you already know and are comfortable with, but you do have to open yourself up around that need. So just because you showed up to that person's class and turned in your assignments every day doesn't mean that you ... that they're aware of your other interests or existing needs. Even though you have lunch with your same peers every day, have you actually expressed that? And so practicing that with the people you do know and are comfortable with I think is a good skill, and then you can start to expand and feel more comfortable. And by the time you go up to a stranger, you've had a lot of practice with your friends and your colleagues and your peers.

Ericka Boone: I want for us to ... I'd like for the people, one second, I'd like for individuals who are participating to kind of engage in a little bit of peer mentoring right now. So in the chat box, can you put in some of the ways, or your best practices, for either seeking out a mentor or for seeking mentees while we have Dr. Rubio to continue with her comment.

Mercedes Rubio: Oh, I was going to say if somebody wants to practice with this total stranger, just send me an e-mail and practice with me.

Christine Pfund: Yeah, and I think, Mercedes ...

Mercedes Rubio: You've seen my face, once, so absolutely.

Christine Pfund: I think, Mercedes, you illustrate such an important point is I think there's such a concern that it won't be well-received, and I can say most people would love to get an e-mail or an outreach and to pay it forward. And as you said, Nicole, if it's a no, they're going to be honest. Like, "I can't do a good job. I just ... I don't have the time. It isn't that I don't want to support you." And I think Nicole's ...

Ericka Boone: And that's a favor. They're doing you a favor, right?

Christine Pfund: Yeah, they're ... Of course. You don't want somebody going, "Yes," and then they don't respond to your e-mail. That's horrible. I'd much rather somebody tell me that they didn't have time. And I just wanted to say, Nicole said some really important points about asking someone to be your mentor. That sounds enormous.

Nicole Redmond: Yes.

Christine Pfund: Asking someone to serve a specific role is a much easier ask and, as a mentor, a much easier yes because we understand what we're saying yes to. And for the introverts, I want to say, this is a pitch. I see some great suggestions of programs, mentoring programs in the chat. And then just a callout to NRMN is these programs in NRMN, a lot has been invested in setting up systems so that you literally can say, "I'd like a mentee or a mentor. I want to search on the social networking platform to see who's a good match for me myself." And programs like NRMN have that. Or that you put in some things that you need, and the programs will do a match for you, but the really sad thing is, is that a lot of people volunteer to be mentors, and then they get matched, and then the mentee never follows up. And part of it is that they're worried. Even after they've matched with someone who volunteered for the program, they're concerned that they really aren't serious about wanting to mentor them. And I will just tell you, people who volunteer are serious about wanting to spend time with you. And so I just want to say that there's even programs like that. There are people wanting to mentor you. They volunteered. They signed up for these programs, and even if it's a little nerve-racking is to just take advantage of that. They want to spend time mentoring you. They want to pay it forward.

Ericka Boone: So, Chris, you said something really important, right? So gone are the days of this know all, omnipotent mentoring paradigm. It's about being specific and understanding what some of your needs are, and pairing with people, and meeting mentors where they are, and meeting mentees where they are. Now, I do have two questions that I want to make sure that we're getting in: the difference between mentoring at different career phases and also, what happens when that mentoring relationship goes a little bit south. I had that happen at grad school with my primary mentor going off to another country to further his career, and there were some of us that were kind of left, and we were like, "Well, what are we supposed to do?" Right? So mentoring across a career path, and also, what happens when things don't quite go as expected? That's for anyone.

Christine Pfund: I can jump in, but, Alison, I know you didn't have a chance to weigh in on the last question. Did you want to take a shot at this one? You can also say pass.

Alison Gammie: Oh, yeah, no, I think that that is a really ... When relationships go south I think is a really important point. And I think that it just goes back to what was laid out before, which is if you have a robust mentoring network and it's not just one person, then you can weather that particular loss. And I think that if you always keep in mind that it's not ... It's crucial that you don't just depend on one person for your mentoring needs. So I think that's ... And if you have this group of people around you, they should be able to swoop in and help you, let's say, if your advisor goes to another country, or even things happen in their life that they're no longer as supportive as they ...

Ericka Boone: That's exactly what saved me.

Alison Gammie: Was having the additional people? Yeah, I think that that's probably one of the most crucial things. So I can't ... There were ... You had two points? What was your other?

Ericka Boone: One was ... It was exactly as Chris said, you're kind of afraid to reach out to other people. But there are other people around you that are willing to help you and especially if you have specific asks. But the other one was mentoring across different phases of a person's career development, so from predoc to postdoc, even associate or assistant professor, but maybe it's ... Is it called mentoring at each phase?

Christine Pfund: It is. And ...

Mercedes Rubio: It is.

Christine Pfund: ... I think this calls out to the first question, too, is, one of the things we don't often tend to when we start relationships is having a discussion about the reality that they are going to change. They are going to transition, and they may even close. That's okay! You can end a relationship. But often what happens is those are never discussed, and so when we get to that point where we have to transition and it feels uncomfortable, we have a conflict we can't resolve, and we need to close the relationship. We don't have a plan for how to deal with that. And so I think one thing that a lot of mentorship education says is to tend to that as a real stage, and in the initial stages of forming the relationship, you talk about, "What will we do when it transitions? What we will do when it ends? What if we have conflict we can't get through?" So that you have a plan before it's a crisis. And that can be hard to do, but isn't it easier to do it before the crisis hits than do it in the crisis when the relationship is already coming undone?

Ericka Boone: Sometimes you don't know what you don't know, right?

Christine Pfund: Right.

Ericka Boone: Especially if you're in earlier phases of your career, but as you get older and as you mature, and you learn more about communication and effective communication, even mentoring up, which is going to be the next question, you'll learn more about how to do that as you feel more empowered. My mentor ... My former mentor and I now have a really great relationship, but it took some time because I felt it was personal, and it really wasn't. But I didn't learn that except by talking with him later on when I felt empowered enough to do so. So what about the concept of mentoring up?

Nicole Redmond: So this is one of my favorite topics. And I can provide a link at some point, or if you want to Google, "Harvard Business Review" actually has a nice series on managing up, so this is something that you do throughout your career in a bunch of different contexts. Again, it starts with you knowing what your needs are, what your communication style is, what your preferences are, your work style. And then you have to be able to assess those things from the other person that you're working with: a mentor, a peer, coworker. Some of that is through observation, but some of that is directly asking, "How do you prefer your communication? When we meet, do you like an agenda before, or do you like a summary after? Or both? Do you ... I'm someone very visual. I like to look at things in writing. So I really need you to recap our discussion because I'm not going to remember." And so knowing that helps you kind of manage that relationship. I wanted to go back to the prior point about how relationships evolve. And so sometimes you have a hard stop. You just finish the dissertation, and you're done. But that is still an opportunity to renegotiate how you're going to work together, if at all, moving forward. And that you should always, even in your back of your head, say, "When is a good time to reassess this relationship?" and planning for that ahead of time.

Ericka Boone: So what you all are saying is that mentoring is an aspect of social support. But also, it's also about effective communication and being willing to communicate even when it's uncomfortable.

Nicole Redmond: Right. A book I recommend for this is one called "Crucial Conversations." I find that one ... And I can't remember the author right now, but if you Google it, it's one of those best seller types, that talks about things because what makes communication hard isn't so much what you say, but the feeling behind it and the intention and your expectation about people's reaction. And so I think that particular book has some really helpful tips on how to manage that whole communication process.

Ericka Boone: Where were you all when I was younger?

Mercedes Rubio: Well, that's what I was thinking the same thing, Ericka, because I didn't do any of these things. And it turns out fine. So if you think, "Oh, I have to take all these notes, and if I do this perfectly, it'll all turn out well," we can't plan life that way. For example, my dissertation advisor and I don't even talk anymore because I have moved on to different things. He has his own career. And we never had that discussion, but knowing that things turned out okay for you, even if things are not as ideal as you would like them now, or a little bit later, know and feel confident that if you made it this far, it's because you have a lot of wonderful skills and talents, and those will continue to carry you. These are all fantastic advice, but know that it's going to be okay.

Ericka Boone: The more you know, the further you go, right?

Mercedes Rubio: Absolutely, absolutely. Yes.

Ericka Boone: That was always ... I'm the perfectionist, right, so, it's got to be perfect in order for me to be able to do it. And so I talked myself out of a lot of stuff. Instead of just saying, "Okay, I'm going to work my way through this, and this might not have been the right way, but we're going to keep going until we can figure out a way to make this work for us." So you guys are giving so much really good information. And there's a question about women in mentoring and networking. Should a woman's approach, or an underrepresented person's approach, be a little bit different to mentoring and networking than other people? Or is this really just kind of a general science of it and everyone should find their own way or their own method?

Nicole Redmond: Yeah, I'm glad you raised that because I see some other things in the chat, and I want to broaden that in terms of this issue around network diversity. And so I think this covers a couple of different angles, and why network diversity is important. There was mentioned in the chat that sometimes you kind of think your mentor can only be another physician or researcher and that there was another question about, "I'm a senior administrator. Can I be a mentor?" And the question is, yes, all of that. So network diversity, whether that's across gender, race, ethnicity, institution, whatever, I like to think of when you have that cultural concordance, that's particularly important for, I think, emotional support and evaluating and navigating the organizational culture. Whereas the culturally discordant, however you're defining culture in that minute, is where, I think that's where you have the influx of new information and innovation. And so you really want to see how that's represented both ways. And so there's value, and it might be as you assess your network that you should have some elements where that person is like you in one or more of those dimensions, but you don't want it so homogeneous that then you are missing out on those different perspectives that someone that's not in your discipline, not of your race or gender could offer.

Ericka Boone: So you can mentor outside of your area of expertise, and that's okay.

Nicole Redmond: You should! You should.

Ericka Boone: Can we talk a little bit about the concept of cultural competency and why you shouldn't be afraid of that word or that phrase in the context of mentoring? So let's just say I'm a mentor. I've heard of this term, cultural competency. Does that mean that I can't mentor people from other backgrounds? I can? Or does it mean that I have to learn a lot of stuff in order to be able to do that?

Nicole Redmond: Yes.

Ericka Boone: What does culturally competent mentoring mean?

Nicole Redmond: In medicine, we actually use ...

Christine Pfund: Do you want to go, Nicole?

Nicole Redmond: Yeah, well, we use a term called cultural responsiveness and cultural humility, which I think is really maybe a better word choice, is being very explicit about what your experience and background is, but also knowing what those limits are. And having the humility to recognize that you have a certain perspective or bias. Bias is not necessarily a bad word. It's just recognizing that your view is going to be limited and constrained by your own experience. So I think, again, this is part of that self-assessment is knowing that. And then that humility is knowing what you don't know and being willing to offer support to expand your knowledge and willingness to expand your knowledge in areas that you're not comfortable with.

Ericka Boone: Chris, did you have something that you wanted to add to that?

Christine Pfund: I really just want to build on what Nicole shared. I agree. I think competence suggests you've reached a certain level, like the top level, and I think that it's a process. We're all starting from different places, but I do think that it's critical, and the way you phrased the question, Ericka, I really appreciate, is, "Does it only mean and if you're from a certain cultural background, you can mentor certain people." And if that's the case, we're in trouble, because that's not what the system supports right now, and that's what's causing burnout and cultural taxation on folks in terms of certain people being called on to provide a lot of mentoring to folks from varied backgrounds. So I think it is a call for social justice that we all engage in that cultural humility, and learning to be more culture responsive is a learned skill. It takes work depending on where you're starting from, and there are a lot of resources out there. They're not hard to find in how to advance from wherever you're at. And it's not easy, and it's messy. And it's not like tomorrow you're going to wake up and know how to talk about every mentee regardless of their background, but it's ... Like Nicole said, it's that willingness to have that humility and go, "I don't know everything I'm doing. I'm trying, but I'm not going to pretend it doesn't impact your experience if you come from a different one than mine."

Mercedes Rubio: And ...

Ericka Boone: I appreciate these ... Oh, go ahead, Dr. Rubio.

Mercedes Rubio: ... I was going to say, if you're a mentor who really, honestly cares and has a great sense of empathy for others, I think some of those things that ...

Ericka Boone: It comes across?

Mercedes Rubio: ... it will come across a little bit authentic. And it doesn't matter if I'm a Latina and you're not, or if I'm a woman and you're not, or ... I think when you care and have empathy, hopefully it comes across very genuine. And you, as that person, will try your best to be able to be a good mentor to somebody else.

Ericka Boone: I think that you guys hit upon something really important, too, is that mentors understand in what they can and can't give. And to reach out to other people to maybe be of assistance in a mentoring relationship when they understand that there's something that maybe they might not be able to provide. So we're going to have to get ready to go. I do have one question, right? One of the questions was going to be being a mentor at different ... being mentored at different phases because a lot of times you get to your mid-career, and you look around, and all your mentors have moved on to different positions. And that's kind of like, "Well, what am I going to do now?" Right? So you have to invest currency in developing continuous mentoring relationships. But our ASL interpreters are getting a little tired. I'd love to keep going with this conversation, but I have one more, and I think, Alison, this might be a good one for you. In the context of T32-supported training programs, what do you see as the three biggest flaws in mentoring aspects for these programs? Or what are the three biggest missed opportunities?

Alison Gammie: Well, I don't like ...

Ericka Boone: This one's been sitting there. I didn't want to let that one go before we ...

Alison Gammie: Sure, sure.

Ericka Boone: ... finished the whole thing.

Alison Gammie: I think people probably know that we've really changed our language around our T32 funding opportunity announcements to focus on the trainees specifically and what skills they need to get to the next step. We also have a lot of language around mentoring and the importance of mentoring and providing safe and inclusive research environments. So what we're trying to do is really move people away from the mindset that it's just all about the research and the latest research finding, and that people are just workforce, and their role is to get the next important research finding. We're trying to reinject the idea of these people are trainees. They need the space to learn and make mistakes and develop their skills. And that it's a real privilege to mentor, to teach and mentor. And so it's not a given just because you're a great scientist that you're going to necessarily be a great mentor. And so we really need to have discussions in this space. We have this beautiful evidence base from the work of people who have been working in this space for quite some time, and so read the literature. Think about these things. Think about how you can bring them to your institution and really change the culture where teaching and mentoring is valued. I think that can go all the way to the top. We should have an incentive structure where teaching and mentoring is valued. So tenure and promotion is really tied, in some way, to how dedicated you are to the next generation of scientists. So I just think there's a lot ... It's just going to take a complete culture change, and this will make it a better environment for everyone, but particularly for women and underrepresented minorities.

Ericka Boone: Well, thank you so much to our panelists. Thank you to our attendees. If your question was not answered, please feel free to reach out to our panelists. They're going to be in the booths. Visit the NRMN booth. Visit NIGMS. Visit NCATS. Visit NHLBI. Thank you all for your participation. This was a really great conversation about mentoring in the context of social support to support career development. I appreciate you all for being here tonight. Thank you so much. Resources will be available in the resources or swag bag, or whatever it might be. Ask around. You'll find them. But thank you all for joining us this evening, and good night.