

## Clyde Yancy, MD, on the importance of research for students & residents

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AMA's Moving Medicine video series amplifies physician voices and highlights developments and achievements throughout medicine.

### Featured topic and speakers

In today's episode of Moving Medicine, a discussion with Clyde Yancy, MD, MSc, vice dean of diversity and inclusion, and chief of the Division of Cardiology at Northwestern University's Feinberg School of Medicine about the important role of research in medicine and how students and residents can get involved.

Learn more about this year's AMA Research Challenge and its \$10,000 prize.

### Speaker

- Clyde Yancy, MD, MSc, vice dean, diversity and inclusion, Feinberg School of Medicine

### Transcript

**Unger:** Hello, this is the American Medical Association's Moving Medicine video and podcast. Today we're joined by Dr. Clyde Yancy, vice dean of diversity and inclusion, professor of medicine and medical social sciences and chief of the Division of Cardiology at Northwestern University's Feinberg School of Medicine in Chicago about the important role of research in medicine and how students and residents can get involved. I'm Todd Unger, AMA's chief experience officer in Chicago.

Dr. Yancy, first of all, you have a lot of jobs so I really appreciate you spending a few minutes with us today to talk about research. Also, want to let the audience know that I heard the good news?—that you will be reprising your role as a judge for this year's AMA Research Challenge, which now carries a \$10,000 grand prize. So thanks for doing that for us again, I'm excited about it. We know that research always plays a critical role in medicine, but can you tell us why promoting research is

particularly important right now as we emerge from the pandemic?

**Dr. Yancy:** So Todd, really wonderful visit with you again and really terrific to work with the AMA on yet another research challenge because it really does require that we refresh our perspectives on research. Research always comes across as staid, as old, as something that's done by people hunched up over benches and looking through microscopes and nothing could be further from the truth. Let me make a very pointed statement. Every effective treatment in today's world of health care started as a research question. Started as an initiative by someone to say, "This isn't clear, let's study this." Or started as someone saying, "We have an unmet need here, let's pursue this." And out of that we have had some eruptive discoveries, that haven't just changed medicine, Todd, they've actually changed the way we live, but we don't know enough. If nothing else, the pandemic taught us how vulnerable we are to knowledge gaps.

Todd, think about what I just said. Our vulnerability is in part socio-economic and part cultural. But it is also, in part, our knowledge gaps where events occur about which were not well-informed, consequences of which we're not prepared to address and outcomes that we can't modify because we don't know enough. The way we advanced our knowing-ness, Todd, is by doing research. Now there's one more direction I want to extend this open comment because the intent of the AMA Research Challenge is to the next generation. Why the next generation? Because we need to have people in the room formulating very different kinds of questions. Is there a different way that we use artificial intelligence and proceed with data science? We anticipate that the next generation will be much more facile with the issues like that.

The next thing, how do we understand better this interface between health and society? We need people who are willing to become very invested in society globally and look for ways that that nudges or changes health. And then the third piece is how do we take our health and use it as an asset, as a vehicle that improves quality of living, that improves longevity and improves economic productivity. Those are the domains where the classical researchers like me and my peers from 30, 40 years ago, never explored. We never even thought about the intersection of health and society. So incredibly important now. We had data by hand and now data is different. And so it's really important to get these fresh lenses to come into the room and help us think about the novel, new, disruptive questions.

**Unger:** Well, Dr. Yancy, speaking of kind of fresh eyes like you're talking about before, what do you see as kind of these emerging topics in research right now?

**Dr. Yancy:** So there are a couple of things that I think are so incredibly important, I'll be more specific. Think about the ability to use data as a form of predictive logic. I am so accustomed to taking care of patients who come in with a symptom. A symptom is usually pretty far along in the disease process. I've become quite adept, I think, at preventing disease and capturing people before symptoms are substantial. But even then, we're pretty far along the process. Think about being able to deport predictive logic that helps us understand ahead of time who's at greatest risk, who's most likely to

become ill. Where will our mitigation strategies best be deployed to prevent the public health burden of unbridled illness, which we've just seen? So that's the very important question that I hope we all pause and consider.

The other thing that I think is really necessary is something that has been very contentious and that is incorporating race in our understanding of science and of health. But not race in the classical sense of someone Black or white, or is someone from a different ethnicity like Hispanic or not or a different geography like Asian, but what are the associated characteristics that partner with genes, the characteristics of which there is a greater vulnerability to the health. Color of the skin, the country of origin, probably has little to do, if any to do, with your health. But the environment in which people live the way in which people live and congregate probably has a lot to do with the health.

We need investigators who have the courage to face these questions, the courage to challenge conventional wisdom, to look more deeply and understand what is it about race or ethnicity or geography that carries with it this risk of certain diseases and can we interface there? That means that there's got to be a new kind of thought process. It can't be the thought process that was acculturated in the sixties or seventies that immediately thinks very differently when you say the word race. So I think that becomes very, very important.

And as we try to understand how do we partner with planet Earth better? We need somebody who's an investigator. Who's raising a question saying, "What are all of the permutations of climate change? What are all of the economic risks of the world in which we live? How do those risks interface with our health and are there solutions that we can come up with collectively that can lessen what's happened to our planet and move our health forward." Todd, that's a whole another generation of investigators. People that will come into a room and think very differently, "You know what? I think that \$10,000 nudge will get some of our brightest minds thinking very provocatively about climate change, data science and sociology."

**Unger:** First of all, I hope so. We're excited about that addition to this year's research challenge but just listening to you, it makes me excited about the three frontiers that you've outlined. And I have to think as a student or a resident that would be very exciting as I embarked on a research career as part of a medical career. How do you advise students and residents to think about that part of their career?

**Dr. Yancy:** I invite students, residents, to embrace the restlessness. To understand that when you're feeling restless and the restlessness is because you don't have the answer to a question or you don't know what to do next, that's the right phenotype. That's the fertile ground. That's where I've got a mind that's willing to open, it's willing to think about new directions. And then look for that individual that's already established as an investigator less so because they're studying the question about what you're interested, but more so because they have perfected, or at least refined, a pattern of pursuit. Again, I'll say that very carefully, a pattern of pursuit that allows you to answer questions. So then it's

plug and play, just bring the new question in and replicate that pattern of pursuit that will help you.

And the third thing, Todd, and this is very important, and it's a sobering message and it's important for every young investigator to realize this?—understand that your question to you may be the best question there ever was, it may be the most novel concept. It may be the burning platform you think in the country and you'll discover that nobody else is interested or to discover that someone else has pursued it, or you're discovered as someone else has maybe developed an answer. Accept that reality, one of the first attributes of a successful investigator is humility. Understand that questions arise all the time. Somebody somewhere has been thinking similarly about these questions.

So kind of swallow whatever it takes, do a landscape survey and see as anyone else thought about what you're thinking about and use it as a learning exercise, not as a deflating exercise. But it really, you want to find someone that has understood how to pursue a question. If you can find that person that mentioned it and you can take that pattern and apply it to your question, you'll be fine. And maybe that's the other point of emphasis. Research is not this thing that you do in dark corners and you're sad and you never rejoice, you're never sober. It's fun when you see the dots coming together and who doesn't like to answer the question. I mean, who doesn't like to do that?

**Unger:** Yeah. I love ... We started with this kind of patterns of pursuit and it's a really for me, learning has always been kind of a solution to restlessness and my area has become further and further influenced by data and learning and that sense of being humbled. And entering in a humble fashion because the world is open to you with the data that you have and the ability to do experiments and just continue to learn from that. So I love your point of view there. You've always been a big supporter of student and resident research and you did serve as a judge for the 2020 research challenge, which was different in that it was virtual but had so many more people involved than we've ever experienced before.

For those of you that are not familiar with it, the research challenge from AMA is the largest national multi-specialty research event for medical students, residents and fellows, and international medical graduates. And as you mentioned upfront, exciting news, that the winner of the challenge this year is going to get a grand prize of \$10,000 sponsored by Laurel Road. So I'm curious, Dr. Yancy, you were a part of the initial kind of virtual panel of this, what was your experience of last year's research challenge? What'd you learn from being in that?

**Dr. Yancy:** So the memorable experience was the experience away from the camera. The camera screen, show, et cetera, was fun. Making the decision, it was almost a Jeopardy moment, right? But it was away from the camera when we had an opportunity to actually visit with investigators and just say, "Tell us, why don't you study this? What were your challenges? What will you do next? What have you learned in the process?" Because here's the most important thing or one of the most important things, you know you execute well on a research initiative when you end up with more questions than answers. You may go in and get an answer. But if you use more questions about

process, more areas of discovery, more questions about teamwork, about leadership. That's where the good, particularly at the threshold of students, residents and fellows, because that's the seed we want to plant. This is fun. And it's fun because one step builds off another.

And one of the big things that we talked about and this was on camera. We made it very clear, don't be afraid to fail. This is the time in your maturation as an investigator when you want to fail and fail often. And that seems counterintuitive but you really want to know how do you regroup? How do you rebound? How do you recalibrate? How do you refocus? How do you learn from past experiences? You can rejoice your wins but you learn from your losses.

**Unger:** You kind of ... it's a good segue into my final question for you because you've kind of started to already talk about guidance. I'm not sure that most people that are new to research would enter it thinking about what you said about exposing more questions at the end of this and not necessarily being definitive. And this idea of, I don't know, we call it in my line of work of failing fast and that just kind of iterative process of moving forward. Do you have other kind of pieces of advice for these future researchers?

**Dr. Yancy:** There's one really important piece of advice. Be willing to share, be willing to participate. Understand that leadership will come but if you start off really wanting to own this niche to the exclusion of others, it's not a good model. Research is a team sport. It is absolutely a team sport. And your ability to yield to others is another one of those really big stepping stones towards success. So don't be afraid to fail. Find the right mentor. Think about finding someone that understands the purpose of the question, those things coming together with being a team member really sets you up for what can be just a really joyous moment. It's fun. It's fun. It's hard but when has difficulty been a deterrent to participate in anything that's good.

**Unger:** Dr. Yancy, we are so glad you're going to be rejoining this year. I'm really, really excited about this year's research challenge. Just for everybody out there, we're accepting abstracts right now for the research challenge and we'll be doing that through the deadline of July 21 at midnight central time. So don't miss out on the chance for that \$10,000 prize and to be able to learn from our impressive panel of judges, which will include Dr. Yancy.

For more information on submitting an abstract and the detailed timeline for the research challenge, go to [ama-assn.org/researchchallenge](https://ama-assn.org/researchchallenge). In the meantime, we'll be back soon with another Moving Medicine podcast and video. Thanks for joining us. Subscribe to that AMA podcast at [ama-assn.org/podcasts](https://ama-assn.org/podcasts). Thanks for joining us, please take care.

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