Health Pulse Podcast
Season 5, Episode 9
Guest: James E.K. Hildreth, Ph.D., M.D.
Meharry Medical College

ALEX MAIERSPERGER: There aren't enough doctors today. Medical school is too expensive. There's wide disparities in health outcomes across different populations. And now AI is bringing change to the industry. Today on the Health Pulse Podcast, you'll hear from the leader of the first medical school in the South for African Americans, which today is the largest private, historically Black institution in the US, solely dedicated to educating health care professionals and scientists, and a top five producer of primary care physicians.

Dr. James Hildreth, 12th president and CEO of Meharry Medical College. Thanks so much for being here.

JAMES HILDRETH: Thank you, Alex, for having me. I'm looking forward to the conversation.

ALEX MAIERSPERGER: You've been awarded Nashvillian of the Year in Nashville, Tennessee. You've been all over news on TV. You've had patents that led to a drug coming to market. I imagine that world of people is pretty small. What's the achievement you most enjoy talking about?

JAMES HILDRETH: Alex, the achievement I'm most proud of talking about is what got me started on my journey. You know, when my father passed, when I was 11 years old, I was very angry about it. My mother challenged me to do something about it. So I decided I was going to become a doctor myself and make sure that health care was available to people who looked like me in Arkansas.

But I knew my chances were slim. This is 1967. I don't think there were any Black doctors in Arkansas in 1967, at least that I'm aware of. So I didn't have any role models. All I had was a library to go to, to read books and magazines about medicine and medical schools. And at the time, there was a couple of those books or magazines that ranked universities according to your chances of getting into medical school if you're a pre-med at those universities.

The university that stood head and shoulders above all the rest was Harvard University. So I decided, if I'm going to go to medical school, given that my chances are so slim, I first need to get into Harvard, because then I think I'd have a reasonable chance. So I did a number of things to try to make myself attractive to Harvard. I did sports. I had two jobs, superintendent of the Sunday school. I got elected president of my student body.

But I went to bed thinking about it, getting into Harvard, I got up thinking about it. And as fortune would have it, I got into Harvard and all the other Ivy League schools. But since my research had said Harvard, that's where I went. And I think that set a pattern for my whole life and career of deciding what you want and then mapping out a pathway to get there, and that's what-- so I'm really proud of that. And I think it's a seminal event in my life, because if I hadn't gotten into Harvard, I might have gone to medical school anyway. But, you know, Harvard being Harvard, it really did have an impact, and that's what I'm most proud of.

ALEX MAIERSPERGER: That challenge from your mom has ended up blessing a lot of lives. What an incredible story.

JAMES HILDRETH: Yes.

ALEX MAIERSPERGER: Speaking about setting a vision and then mapping your way into it, you recently served on the president's health equity task force. We've all seen some really sobering statistics about the disparities in outcomes across populations. What's the vision for the future of an equitable future, and what type of investments are going to take us out of this mess?

JAMES HILDRETH: So, Alex, I think the future we should all hope for is for all of us can achieve our best health, our optimal health. That includes our mental well-being, physical well-being, and a sense of belonging in whatever community we're in. That means we have to understand that health equity does not mean health equality.

Some of us need more to achieve that goal than others do. For example, there are some zip codes-- there are some neighboring zip codes in the United States for the life expectancy is two decades different, and that should be unacceptable to us. It has to do with the social determinants of health-- where you live, your educational attainment, your economic stability, your social construct, and the physical environment around you, the built environment.

So I think in order to achieve optimal health for all of us, we have to be focused on those things, making sure there are no food deserts, making sure that everyone in our country has access to healthy foods, and has access to health care. Even though health care only counts for, you know, 10% to 15% of being healthy, that's still important. But more importantly, we need to start screening people to catch things early, because when we do that, we save lives and reduce costs.

ALEX MAIERSPERGER: On the technology side, AI has vast potential for a lot of the intertwined parts of your background, from drug discovery to medical education. Where do you see the most exciting applications of AI in the future?

JAMES HILDRETH: Alex, there are so many. But one that may not have been considered before has to do with reshaping the patient/physician interaction. Ever since Laennec invented the stethoscope back in 1816, it's the first time that technology separated the physician from the patient. He actually took a newspaper or a magazine, rolled it up, and stuck it to the chest of a young lady he was taking care of, to preserve modesty, among other things.

But my point is, that tube separated him from the patient, and over the many decades that have followed. When you go to your physician now, there are not likely to engage you in the way they used to, because they have to be attentive to a tablet and make sure your boxes are checked, so that compensation can be had from the interaction.

One thing that I could do is in the background, AI could be collecting notes from the conversation to generate the write up of that visit, and the physician could focus their attention on the patient. In other words, AI might be responsible for restoring that thing we all went to medical school for, which is to form connections to our patients and engage them as a human to a human. And that's become largely not the case. But AI might actually restore that for us.

The other thing that AI will likely do is we're now beginning to sequence human genomes by the hundreds-- by the thousands, actually. There's going to be an incredibly rich data set to start making discoveries about disease and causes of disease, find new interventions for diseases. There are 7,000-- more than 7,000 diseases caused by genetic mutation that we don't have a treatment for. And there's no way in the world that the human mind could comprehend, digest, and even make sense of all this data. But AI will be all the difference. And I think AI will accelerate going from a data set to a drug or an intervention, tremendously. So I'm really excited about that. And we're trying to make sure our students

here at Meharry Medical College understand the potential and the power of AI as they go through their training, because it's going to be a part of what they do, whether they know it or not. In fact, it's already a part of what they do.
So I'm excited about it, but I'm also a bit nervous, Alex, because as you know, AI can also be used for harm in the hands of the wrong people. But I think, overall, as someone has said, it's probably the greatest invention by the human brain since humans were humans. It really is that incredible. So I'm excited about it, but also nervous.
ALEX MAIERSPERGER: I share those sentiments. That's amazing. I feel like I got pulled into the past with the history lesson and then pushed into the future with your excitement and some of the areas where AI can really make a difference.
JAMES HILDRETH: Yes.
ALEX MAIERSPERGER: All right, we're going speed round on you. And some of these will be yes or no questions, and just real quick reactions to a few of these things, both professional and personal.
JAMES HILDRETH: OK.
ALEX MAIERSPERGER: Will AI make health care more affordable?
JAMES HILDRETH: Yes.
ALEX MAIERSPERGER: What's one area where I will make the most difference in medical school, specifically?
JAMES HILDRETH: It will accelerate discovery and how we teach medical students the facts about physiology and the human body.
ALEX MAIERSPERGER: What's one thing, cultural or from their health care system, you'd steal from another country to make us healthier in the US?
JAMES HILDRETH: I would still the connection between health care workers and patients that I've observed in Jamaica and other places. They don't have fancy machines or fancy technologies, but their outcomes in certain areas are better than ours. For example, maternal mortality in Jamaica is much lower than it is in the United States, across the board. And they don't have all the fancy technologies that we do. So I would want to steal that connection between provider and patient, that can make all the difference in outcomes.
ALEX MAIERSPERGER: I love that. I've heard you refer to physicians as healers, so you often don't use the word physician. Is that-- that sounds like getting back to the root of it.
JAMES HILDRETH: Yes. I mean, I think that, in essence, what we're trying to do, if someone comes to us with their most precious possession, their health, in my opinion, counting on us to restore that. And that's a process of healing, right? And sometimes that involves more than writing prescriptions, more than doing an exam, but being connected to the person in front of you. And that's what healing to me is all about, restoration of something that needs to be corrected or repaired.
ALEX MAIERSPERGER: Health certainly is the most prized possession. What a sincere quote. What's your favorite breakfast food?
JAMES HILDRETH: Cap'n crunch.
ALEX MAIERSPERGER: I mean, regular Cap'n Crunch or the Berry stuff?
JAMES HILDRETH: No, just regular Cap'n Crunch. Whenever I do my bike rides, I treat myself by having Cap'n Crunch.
ALEX MAIERSPERGER: Amazing. Mountains or beach?

JAMES HILDRETH: Mountains.
ALEX MAIERSPERGER: So I sense some hesitancy there.
JAMES HILDRETH: Well, my wife loves the beach and I love being at the beach with my wife, but if I had a preference, I would be on the mountain and have the vistas, the beautiful vistas all around. That always gets me excited.
ALEX MAIERSPERGER: Love that. Morning or night?
JAMES HILDRETH: Oh, night, for sure. By a wide margin.
ALEX MAIERSPERGER: You're off the seat in the speed round, but I got a few more questions for you. One is something you said about the other medical schools, either brand new medical schools coming or even the current environment. Obviously, there's competition. In some ways, you're competing for medical students. But you seem to have a very collaborative approach, and it almost feels like that quote of a rising tide rises all ships mentality. Where does that come from?
JAMES HILDRETH: Well, I suppose, Alex, my background as a scientist, where it has to be a collaboration. When you're trying to answer a fundamental question, they usually take you into areas that you're not trained for. And so I've been blessed to be at a place, Johns Hopkins and Harvard and other places, Oxford, where collaboration was just part of the culture. And I do believe that we can go further. As an African proverb says, if you want to go fast, go by yourself. If you want to go far, go with a group of individuals who have the same spirit as you do.
And I think it just comes out of my love of science and how we do science, where it's collaborative. And I love projects that are transdisciplinary, because sometimes when someone was brought into a conversation or a question that's not been right on top of it for their whole lives, they can ask the one question that might help you get there faster. So I think that collaborative spirit of mine comes from my profound love of science and how science is conducted.
ALEX MAIERSPERGER: Love that. There's a lot of discussion-- we'll talk again about the medical college side of it and the training of physicians. There's a lot of discussion right now that I see on social media and things about the future of primary care, centered on especially how expensive medical school is and how it's difficult to graduate with so much debt and then choose to be a primary care doctor.
JAMES HILDRETH: Yes.
ALEX MAIERSPERGER: What's Meharry doing about this?
JAMES HILDRETH: So, Alex, you've touched on a very critical issue, I think, for the whole country. We need-- there are some estimates that we'll need more than 100,000 additional physicians over the coming decades. And I would argue that most of them, or at least a substantial portion of them, should be primary care physicians, because they represent the front line of health care, right? Screenings, managing chronic diseases, et cetera.
So what we're trying to do here at Meharry is raise an endowment, strictly devoted to scholarships so that our students don't graduate owing almost $300,000. We've had students leave us owing $400,000, because they brought undergraduate debt with them, then there's the medical school debt on top of it. And before you know it, you're talking about hundreds of thousands of dollars.
And so we're trying to raise money to reduce that debt burden that they have. We're trying to do other things. For example, we're building living and learning centers where we control the rent that the students pay to keep that cost as low as possible. And in Nashville, that's really important because housing costs have just skyrocketed over the last few years.

But I think it's a national mandate, it should be, that students who choose primary care, who have a debt, should have some of that debt relieved in order for them to make that decision. If you're going to be a pediatrician and you graduate owing $400,000, that's going to be a really tough decision to make. Because you want to have a decent lifestyle and be able to take care of your family, and pediatricians are among the lowest on the pay scale for doctors.

And so, as you pointed out, Alex, going forward, it might become increasingly difficult for medical student to choose primary care if they have to pay off these loans. They're going to choose interventional radiology or, you know, a surgical specialty or something. So I think it's a national-- it's not a crisis, but it might be soon if we don't do anything about it. But we need more primary care doctors.

And let me just add one more thing. We're the only country-- I think advanced nation where public health and health care are thought of as two separate things. We need to make sure we make some efforts to bring them back together again, so that physicians who are on the front lines are in communications with and sharing data with public health officials, to focus on communities, not one individual at a time. And that's something else that we're working on here at Meharry.

ALEX MAIERSPERGER: Really meaningful work. Can you tell me more about the-- you mentioned 500,000 or, I think that was the number of genomic testing and the sort of Biobank that you have available. Is that a Meharry thing? Is it a partnership thing?

JAMES HILDRETH: Well, it's a partnership, and it grows out of the observation that-- well, let me back up. The first human genome was fully sequenced-- technically not fully sequenced, but covering the whole genome in 2003. It took a decade. Hundreds of scientists contributed, and it cost more than $1 billion to do it.

Today, as I sit and speak with you, a human genome can be sequenced in a matter of hours at a cost of less than $1,000. So hundreds, actually thousands of genomes have been sequenced, but very few of them come from people of African ancestry. What that means is that when these large data sets are subjected to the development of algorithms and drug discovery, they won't benefit people of color as well as they do people of European ancestry, because we're not well represented in the data set.

The idea would be to have those 500,000 volunteers give us samples for sequencing their genomes, and the data without identifiers will become part of a data set that will be used to ask questions about the linkages between disease traits and genomic sequences. But more importantly, we'll make sure that those kinds of analysis that are being done to make discoveries about what caused diseases, and how diseases are treated, that they'll be impactful for people of African ancestry as well as everyone else.

And the second part of that, which I'm really excited about, is we're establishing programs for K to 12 students and undergraduates to get exposed to genomics and data science and artificial intelligence research while they're still in their K to 12 programs. It's really exciting to me because I don't believe children can get excited about something they're never exposed to.

When I was Dean at UC Davis, I took some students with me to two elementary schools to talk about science and STEM. And one third grade class I saw, they were doing something I didn't quite recognize, and the teacher pulled me aside to say they're writing computer code. So these third graders were writing computer code, as if they were doing their ABCs. But I recognize that this is a really well-resourced school that could do things like that.

But most of the other schools that served disadvantaged communities had no way possible to do that for their third graders. So I'm determined to make sure that these technologies that are so exciting, that we

expose children to them at an early age, so that they might dream about, this is possible for me. And I'm really excited about that.

Because not only is the data set itself not diverse, the people who do data science research and artificial intelligence research, the number of people who are from minority backgrounds are vanishingly small. We hope to change that.

ALEX MAIERSPERGER: It's incredible to hear. The better question is probably, what aren't you doing instead of what are you doing. Sounds like you're tackling so many of the societal challenge and so many of the medical challenges from, like you said, K through 12, to providing housing for medical students, to everything else, setting up genome sequencing banks.

JAMES HILDRETH: Well, I think I've been blessed to have some really extraordinary opportunities. Going to Oxford as a Rhodes scholar was amazing. I got to meet people from all over the world and really learn that-- I call it cultural humility. There are people in the world who don't have the resources that we do, but their health, in some ways, is better than our own.

I also thought that during the pandemic, American exceptionalism caused us not to achieve our goals as quickly as we could have, had we accepted some data coming out of other countries. So I think I'm just sensitive to this idea that people who look like me should have opportunities to do whatever they choose, whether that's data science, artificial intelligence, medicine, dentistry, research. And I'm trying to make sure Meharry can sustain its place in the fabric of health care, where we've been one of the schools that have made sure there's diversity both in providers, but also in people who get care.

And, you know, for me, being Meharry's leader is like my life has come full circle, because I believe my father died sooner than he should have because we were Black and poor and he didn't get much medical attention. So for me now to be leading an organization whose foundational purpose was that, I think it's pretty cool.

ALEX MAIERSPERGER: It's amazing. When your mom challenged you to do something about the anger and put it into productivity and you decided on being a physician, where along the line did it occur to you-- was it exposure? Was it a mentor? Where did you-- where did the sort of, I'm going to be the president of a medical college, now I get to lead the physicians.

JAMES HILDRETH: I wasn't really thinking about being a president, to be honest with you. But when I was a faculty member at Johns Hopkins, I think I had just been promoted to associate professor. And the Dean at the time, Dean Johns, Mike Johns, I think it was, decided to create an internal leadership training program so that Meharry could train its own leaders, right.

He asked every department chair to identify one member of the department to participate in this program. And my chairman, Dr. August chose me. And I didn't-- I said, doctor, I said doctor August, I'm sorry. I just got promoted to associate professor. I'm trying to get my grants funded. There's all these other things going on. He asked me again, I said, no, again.

Then one day he summoned me to his office. And Dr. August was a very interesting individual. In his office was this big, fluffy sofa against one wall, and against the other wall was a dentist chair. So if you got invited to Dr. August's office and he asked you to sit in a dentist chair-- I'm not making this up-- you knew that the conversation was not going to be a pleasant one.

And he proceeded to tell me that he's not asking me anymore. He's telling me that I'm going to be a part of this leadership program. And so I kind of shrug my shoulders. But I went to the leadership training program. And after about the third session, it really occurred to me that leadership does matter and can

make a difference. And I got into it a bit more. And I ended up being asked to be Johns Hopkins first Associate Dean for graduate studies. They never had one before, despite having hundreds of graduate students at the medical school.

And I did that work. And that kind of planted the seed in me that perhaps one day, I might want to be the leader of an organization like this. But it all happened primarily because Dr. August, you know, had me sit in that dentist chair and instructed me, tell me that it's not a choice anymore, James. I'm telling you, you're going to do this. So that was the beginning of my lack of interest that turned into a strong interest in leadership and how it matters.

ALEX MAIERSPERGER: Pretty awesome. That symbol of the dentist chair making it real. It feels-- that's awesome.

JAMES HILDRETH: In fact, I've been looking for a dentist chair myself. Put it in my office.

ALEX MAIERSPERGER: Put in your office. It can go right next to the box of Cap'n Crunch. That's full circle.

JAMES HILDRETH: That's right.

ALEX MAIERSPERGER: We've heard bits and pieces and just incredible visions of the future for Meharry Medical College. Can you put that into the succinct version of, what is your vision for the future of Meharry Medical College?

JAMES HILDRETH: I want Meharry Medical College to continue to be a strong voice and advocate for equity, both in health care provision, but also those who provide the health care. We have a mission that spans back to 1876, where we were created for that reason. But we have to do that now in a modern context.

Over the decades and millennia, whatever that we've gone through-- not millennia, but, you know, the century and a half we've been doing this, things have evolved. So we have to evolve and make sure we're doing it in a modern way. So our North star, as I call it, is, our mission. But how we deliver that mission or make sure that mission is realized has to change.

And that's why when I first started almost 10 years ago, I told the campus, we're going to be focused on data science. We're going to be focused on public health. Because I've been concerned for a long time, that if we could just find a way to have public health and primary care merged or somehow interacting as entities, it would benefit our country and reduce that $4.5 trillion price tag for health care that we have.

ALEX MAIERSPERGER: Hearing your vision for the future and hearing the program that you've put together and the thoughtfulness that's put in the blend of technology and people first, I can't wait to be treated by a Meharry Medical graduate. And I think if I have the chance to choose my doctor, I'm choosing one that comes out of your program.

JAMES HILDRETH: I promise you, you won't be disappointed. In the earlier days of our existence, back when Meharry's-- we'll say in the-- in '40s, '50s, '60s, we had professors who were really, really, really, really tough. And some alumns have complained about how dogged they were, how hard they were on them. But the truth is, those professors understood that in order for a Black student and Black doctor to be taken seriously, they would almost have to be better than their white counterparts.

And so that is part of the reason why Meharry physicians and dentists can outperform most physicians and dentists, when it comes to clinical competency, because of that history we have of believing that we have to produce better in order for them to be considered equal. That's not so much true now, but

certainly back decades ago, that was the case. And we had professors who were very tuned in to that idea.

ALEX MAIERSPERGER: But I don't think it's a big leap to think that some third grader right now that's being trained in a program and learning how to code and things will be able to apply their background and skills now to that big data set, multi-country and different regions of the globe, and really make a difference here in the short future.

JAMES HILDRETH: Absolutely. And that project should have a generational impact because of what you just said.

ALEX MAIERSPERGER: Dr. Hildreth, this was amazing. Again, a look into the past, a crystal ball into the future. I'm so excited for the healthier future that you're continuing to help create. Thanks so much for being here.

JAMES HILDRETH: Thank you, Alex. I really enjoyed it.

ALEX MAIERSPERGER: To our listeners and viewers, we know you have infinite demands on your time. Thank you for choosing to spend a little bit of it with us. If you'd like to leave us a comment or join as a guest, please email us thehealthpulsepodcast@sas.com. And if you were wondering, yes, those were my kids you heard in the background. We're rooting for you, always.