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## Transcription:

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DR: Dorothy Roberts, JD

UE: 00:10 [music] Welcome back to the Antiracism in Medicine Series of The Clinical Problem Solvers Podcast. Where, as always, our goal is to equip our listeners at all levels of training with the tools to practice antiracism in their health professions' careers. This episode is the third and final episode of our three-part series on dismantling race-based medicine titled Towards Justice and Race-Conscious Medicine. I'm excited to be joined by my colleagues Dereck and Michelle, who I'll let introduce themselves, today's topics, and our guest.

DP: 00:44 Hi everyone. This is Dereck Paul. I can't say how excited I am for this episode. In part one of our sub-series on dismantling race-based medicine, Professor Edwin Lindo talked us through defining race, understanding race as a social and political construct. He talked us through the history of race and its origins as a categorization of people, and he talked about the role that the profession of medicine has played in reinforcing race and racism throughout history. In part two, we talk with Dr. Eneanya and Dr. Tsai about the way they've seen race-based medicine play out in their clinical practice. They talked about race-based calculators, harm that it's done to patients they've cared for, and they talked to about current movements to re-examine and change some of these practices. So today, in part three, we get to talk about what lies ahead. When it comes to some of the hardest questions, research, personalized medicine, genetics, diagnostics, race-based pharmaceuticals, how do we move forward with a lens of justice and race consciousness in medicine? How do we reimagine this world in this profession? And so we're so fortunate to have a ground-breaking pioneer, visionary world expert on this topic with us today. And I'll hand it over to my colleague Michel to introduce our guest, Professor Dorothy Roberts.

MO: 02:20 Thanks, Dereck. Hey, everyone. This is Michelle. And I know I speak for all of my colleagues in the CPSolver team when I say that we're really thrilled and honored and a little bit star-struck to welcome our guests, Professor Dorothy Roberts. Professor Roberts is a George A. Weiss University Professor of Law and Sociology, and she's also the Raymond Pace and Sadie Tanner Mossell Alexander Professor of Civil Rights, as well as the founding director on the Program on Race, Science, and Society at the University of Pennsylvania. She is a prolific writer, and we'll be sure to include all of her books in our

show notes. But we are really thrilled because her writing provides this unique clarity on really complex issues. And I think we'd be hard-pressed to find a better person to really help us wrap up this series on dismantling race-based medicine. And so, Professor Roberts, we look forward to your voice and the clarity that you can help us get as we navigate this discussion. Welcome.

DR: 03:25

Thank you. Thanks for inviting me to this wonderful podcast. I've already enjoyed meeting the staff here and the crew, and I'm just thrilled to join you in this important series.

MO: 03:40

Wonderful. Well, I'll kick us off. I think, before we jump into the discussion about dismantling race-based medicine, I wanted to start with the basics of defining race. And I know the listeners may recall that we talked about this before on our podcast. And certainly, it's been a part of the previous episodes in this sub-series. But it's such a foundational place and piece of this discussion that I think it's worth going over again and really hearing different explanations. And so, Professor Roberts, I think it would be extremely helpful for our audience to hear your definition of race, and particularly if you could walk us through how the political motivations for creating racial groups helps us better understand that race really is not a natural grouping or in any way tied to biology.

DR: 04:29

Yeah. Well, I define race as a political invention. I know that a lot of people use the term social construction, and it is socially constructed, but I found as I was working on my book *Fatal Invention* and talking to different groups about it, that people could hold in their minds at once the idea that race is socially constructed and that it is biological. Because they would think, "Well, it's really a biological category, but it's constructed differently in different societies. It has different implications in different societies, but it's really biological." Whereas it is not biological. It may have certain effects on biology because of the way in which it helps to create social inequality but it is not a biological category.

DR: 05:36

So I like to say it's an invented classification of human beings to govern them. It's a way of managing and implementing racism. Racism comes first and then governments and societies have to invent ways of racializing populations. Classifying populations by this made-up idea of race in order to put into practice racism. If you want to subordinate a group of people and claim that you're superior to them by making up that they belong to another race, you've invented race in order to support the political project of inequality.

DR: 06:38

One example I like to give is interracial marriage bans. So interracial marriage bans were implemented in order to support white supremacy and an idea of white racial purity, which was created to give white people a superior position in society. A totally political project of domination. And in some parts of the United States - actually, in most states - they decided to ban interracial marriages in order to support the privileged position of white people. And so in order to do that-- now, again, note, this is all to support white supremacy. It has nothing to do with actual biological divisions between people. It has to do with identifying a group of people in

society who are supposed to run things, and you can enslave other people and make them seem as if they're superior.

DR: 07:50

Well, now, in order to do that and to prevent anyone who's not white from marrying a white person, again, completely for political reasons, you have to identify who's white and who isn't white. And so to implement this aspect of white supremacy, you need a racial classification system. I just give that example to show that racial classifications, or the idea of race, that human beings are divided into races, is a way of implementing racism. You cannot disconnect them. That's the purpose. The very purpose of inventing race was to support and promote white supremacy and racism and a way to manage the various populations that fit into a hierarchy that a dominant group creates.

DR: 08:57

So that's why I say it was invented. It's the very idea that human beings are divided into races is an invented idea. There is no natural division of human beings into races. Another aspect of it-- I think you asked me about, where does it come from? So it comes from European exploration and colonialism and a desire by certain Europeans to conquer other people, take their land, take their wealth, exterminate them, and enslave them. And in order to do that, number one, to justify it. Originally, they had to justify doing this to people who converted to Christianity, because at the time, if you were a Christian, you weren't supposed to be enslaved by other Christians. So they had to figure out, at some point-- when African people were smart enough to convert and to escape enslavement, right? And so they had to figure out, "What are we going to do now? We want to enslave people who convert to Christianity."

DR: 10:15

So they began to create a concept of race that certain people were not human. They didn't deserve the way in which Europeans valued other human beings. And all of that stems from Christian theology that is pre-modern, the idea of who you could enslave and who you couldn't being linked to conversion and the idea that God created the racist. This is a creationist idea. And then enlightenment scientists in the 1700s imported that idea into modern science, into the Enlightenment, which was supposed to be a break from theological thinking and spiritual thinking. It was supposed to be empirical. And it was also supposed to be connected to certain political principles, like equality and tolerance, and liberty.

DR: 11:31

So you have scientists borrowing from pre-modern concepts of some kind of creation of the races. Totally unscientific, right? It's folklore. It's made up. And then importing it into science in order to help justify violent actions. Justify domination and violence and inequality that violated enlightenment principles. But the way to do that is to invent a concept of race where certain people are supposed to be naturally superior. Naturally entitled to enslave others. And then it doesn't look like it conflicts with these political principles because you've identified a group of people who are entitled to all those wonderful things like equality and liberty and excluded on the basis of a supposedly but false biological natural concept of race. The people who are to be managed and governed and brutalized and even killed under this unequal regime.

DP: 13:05 Doctor Roberts, that makes a lot of sense and I think it's very helpful for me to think about it as political invention. And I've also run into exactly what you're talking about, where folks can hold multiple contradictory ideas in their head as well. So what happens often in the classroom as a medical student and the PowerPoint will go up and you'll be presented with a diagnosis and they'll show you a risk associated with this diagnosis, then go to the next slide, right?

DR: 13:40 Right.

DP: 13:39 And so we've all been talking about this and going deeper behind, well, why are those disparities there where racism is often at the root? But one of the things that happens when I'm having these conversations with folks is they'll bring up sickle cell disease, they'll bring up cystic fibrosis, they'll bring up the disparities in hypertension. And when I was reading Fatal Invention, I went, "Oh my gosh." I had never heard so much clarity and thinking about these the nuances in why these are there. Edwin Lindo, talked to us a little bit about sickle cell and malaria and malaria belts in places like Greece and in other places. I'm wondering, can you talk to us a little bit about how we should think about those associations between those things that folks often bring up and say, "Hey, this is evidence that race is biological and I should practice race-based medicine?"

DR: 14:42 Yeah. Well, as Edwin Lindo, I'm sure, said-- I haven't heard the podcast, but I'm sure he made the point that these diseases that are linked to clear-- that have clear genetic associations. Of course, most disease and illness doesn't, right? So already we're talking about a very small number of illnesses that are so associated with one genetic mutation that's extremely rare. But anyway, it is an adaptation to a particular environment and that's all it is. It has nothing to do with huge socially constructed and invented groups of people where there's no way you can identify who belongs to that group without referring to the current social and political definitions of the group.

DR: 15:56 And so whatever disease we're talking about, where there are populations that perhaps because of adaptation reasons, are more likely to have a disease because they're more likely to have the genetic mutation we have to disconnect that from the concept of race. It's like apples and oranges or putting a square peg into a round hole. They're not the same thing. It just doesn't make medical or scientific or even logical sense to try to take a process of adaptation to a particular environment which may cut across the lines that we think about as our current definitions of race and use race as a way of describing it.

DR: 17:07 It's a bad way of describing the biological phenomenon we're talking about. And so doctors and biomedical researchers tend to rely on race when it just doesn't fit what they're trying to do. I mean, to me, so many of the questions about what to do about race in medicine are solved if you just understand what it is and what it isn't. It's an invented political classification, so we should not use it in describing genetic variation and ancestry that helps to explain why a particular

group of people may have a higher likelihood of a disease. Race just doesn't fit that.

DR: 18:13

So if you want to understand sickle cell or cystic fibrosis or any illness, number one, there's the first question of whether genetics is going to help you to understand it. Most illnesses are affected far more by the environment than by genetics, so. And especially if we're talking about health inequities. Those aren't caused by genetic differences. Those are caused by differences in social status, living conditions, experiences of discrimination, and everything that goes into health inequality in the United States and around the world.

DR: 19:07

But even if you're talking about a disease that can be connected to a particular genetic mutation, then that's what you should be focusing on. Not on race, which is not determined by genes, it's determined by political classification. And I just think if you understand what race is, you shouldn't be-- I mean, I think people use it anyway for lots of reasons we can get into that are not-- they're not evidence-based or scientific. They have to do with politics. But if the goal is to have more precise, as they say, medicine, then why would you rely on a giant, permeable, flexible, unstable, social category like race?

DP: 20:19

Yeah. Absolutely. And I've been walking around thinking about this conversation coming and thinking about two of the four of us that would be on the call. And I remember as I was walking down the street and I was imagining, "I bet--" and I won't speak for anybody, but I bet we all would identify as Black Americans, but I also bet we have vastly different ethnicities, ancestries, and genetics. And I wonder, though-- but at the same time, we're all sort of living in the same social environment of the U.S. Do you think that-- is race a proxy for racism? Is it a proxy for the effects of racism in a society?

DR: 21:13

Yeah. So I do think that race is a relevant factor or variable for studying racism. In fact, I think that's the only place it's relevant. I think any other medical question you have, whether you're talking about research that's looking for the causes or the cures for illness, or if you're talking about diagnosing disease in a particular patient or providing therapy for a particular patient, race is not a good category to use. It's always been used for a proxy for something else. Even with sickle cell, it's being used as a proxy for the mutation, the genetic mutation. And this is 2021.

DR: 22:06

By now, we should be able to come up with better ways than using these categories that were imported from false Christian theological thinking into the Enlightenment era in the 1700s. That makes no sense to me why anyone would cling to those categories. We know the origins of them and we know that they're being used for proxies for other things. Why can't we study those other things? Now, when it comes to racism, though, as I said before, there is a connection between race and racism. Race is invented to promote racism. So, yes, people will experience racism differently depending on their race because the racial classifications are there to manage people in a racist society.

DR: 23:13

Now, the thing, though, about it is we also have to recognize that race intersects with other statuses as well. It intersects with

socioeconomic status, with education, with geography, with sexual orientation, with religion. We could go on and on. And all of those statuses I just mentioned, in our racial capitalist, anti-immigrant society, also affect-- gender. All of that. These are all hierarchies that intersect in our lives and they intersect in society. And so we have to have more sophisticated ways of even understanding the impact of racism on people's lives.

DR: 24:08

I mean, clearly, it's very likely that if you're Black in America, okay, you're going to experience anti-Black racism, but you'll experience it differently if you're a man or a woman. You'll experience it differently if you're queer or straight. You'll experience it differently if you're rich or poor. If you're a doctor or if you're a janitor in the hospital. We have to take all of that into account. So even though race is relevant, it's not the only factor in determining outcomes of an individual or a group. But at least it's relevant to understanding racism. It's not relevant to figuring out the genetic predisposition of an individual, or in general, the relationship between genetics and illness.

DR: 25:13

I also want to stress, though, that genetics isn't the be-all and end-all of understanding disease. And so it's true that part of the problem with using race to study disease is that race is made up and people who are identified as belonging to a race may have very different genetic backgrounds. But that's not the only reason why it's bad to use race. It's not as if, "Oh, well, if we get the genes right, we'll solve health inequities." That's not true either. And that's part of the problem with focusing on race. Is that I think part of the reason why race is so popular as a way of understanding health in the United States is that this nation is obsessed with DNA as being the answer to everything.

DR: 26:18

And many people connect race and DNA. So they put this together in their heads. And so they think, "Well, race must be a good way of figuring out how to cure diseases and health inequities because it's determined by people's DNA and DNA is the answer." And so I think to be anti-racist, it doesn't mean, well, then let's just be more precise in our genetics. It means being anti all the things that race and racism do. Their connection and how they work in our society. They work in our society to exclude and marginalize people and target punishment and disadvantage on them. That cannot be addressed by being precise as to someone's genetics. And so I think we have to understand all of this complexity and why it is that race is not a biological category and should not be used.

DR: 27:42

That doesn't mean replace it with another biological category is the answer. It means be anti-racist and understand how the biological concept of race is related to racism. So I oppose the biological concept of race, yes, partly because it's false, but mainly because it is an instrument of racism. I'm not doing it because I want to come up with a better way of identifying race. I once was in a workshop at NIH that came out of an article that I co-authored with three other people, including two geneticists, Take race out of human genetic variation research. And there was a workshop at NIH and all these famous geneticists were there.

- DR: 28:46                   And I and others were trying to explain to them why they shouldn't be using race as a category in their genetic research. And at the end, one of the researchers said, "Okay--" this was all day we're talking. And he says, "I have the solution. We can now move forward. I am going to come up with a more precise genetic definition of each race." [laughter] "Where have you been all day? That's the opposite of what we've been trying to get across." That's not the answer, so. Nor is the answer to focus entirely on genetics as if that's going to be a cure.
- DR: 29:36                   There's absolutely no evidence that genetics has closed the gap in health between Black people, indigenous people, other people of color, and white people in America. It's only going to be closed by ending the political inequalities that we have. In other words, ending white supremacy and racism in America. And that can't be done by being more precise in your understanding. I'm not saying that it's not important to do genetic research and other kinds of research to understand disease better, but we shouldn't pretend that that's the solution to the really staggering and abominable health inequities that we have in the United States.
- UE: 30:44                   Yeah. That's such a wonderful overview from the what is race to do ancestry and genetics play a role. I think another way where individuals have tried to kind of solve this health disparities question and is such a really key part of your book, *Fatal Invention*, was this conversation about race-based treatments. And you provided the excellent example of BiDil, which I was just on the wards a couple of days ago, and we are still wondering, why shouldn't we be prescribing these medications to our black patients versus others? I wonder if you can walk us through a little bit of that story. And again, until today, how are you thinking more specifically around race-based medicine? Do we just need to throw this out once and for all? How do you think about it?
- DR: 31:30                   Yeah. Well, so first, just in terms of the terminology, I use the term race-based medicine to describe all the ways that medical professionals and researchers use race in their diagnoses and treatment and understanding of disease. So race, it shapes medicine and medical practice in so many ways. Not just in pharmaceuticals, but in the very concepts of disease. The very idea that people of different races have different diseases and experience common diseases differently. That is so foundational to medicine.
- DR: 32:22                   But a part of it, and what this leads to in the 21st century, is the idea of developing race-specific pharmaceuticals. So drugs, therapies that are developed and marketed to specific racial groups. And that's what BiDil kind of was. It was marketed to black people as a therapy for heart failure. It actually wasn't developed for black people. It was developed for anyone who was suffering from heart failure on the theory that this drug, by dilating the blood vessels, would make it easier for the patient's heart to pump blood. And therefore, they would have a higher chance of surviving heart failure.
- DR: 33:22                   And the cardiologist who developed it at the University of Minnesota, by the way, was a cardiologist, not a geneticist, and he

developed it without regard to race. His first patent on the drug did not mention race. It was for any patient suffering from heart failure. Again, based on the theory that the human heart would be benefited by a drug that dilated human blood vessels. Okay. Now, the FDA did not approve the drug on his first application because he hadn't conducted new clinical trials. He was basing this on old data from prior Veterans Administration tests of the generic drugs. The drug is a combination of two generic drugs but this cardiologists wanted to patent it as a single pill. And so he now had to figure out what to do. The company he had licensed it to backed out because it was taking so long. He needed a new patent. And so to apply for the new patent, you need a novel claim. And so he added that it was a drug for African Americans. So it was for commercial reasons, not for health-based reasons, that it became a drug for black people.

DR: 35:02

Now, I should mention that there were lots of black people that supported this drug. The Black Cardiologists Association conducted a clinical trial that was eventually done in order to get approval of the drug. A clinical trial only involving African Americans. And members of Congress supported its approval as a race-specific drug. And there was some people who-- the NAACP was in on it. They got a contract from the company that marketed the drug to convince black people to use it. And there was this idea that, "Well, look, the FDA now finally is attending to the health inequities that black people experience." But there were also lots of people who opposed it, including myself, and ordinary, everyday black people who were skeptical of a drug just for black people. I quote in *Fatal Invention*, a woman, a black woman, at a meeting where they were trying to convince attendees to persuade their doctors to prescribe BiDil for heart failure. And she got up and she said, "Give me the drug that white people get." Because why would we think that a drug for black people is going to be the best drug?

DR: 36:42

But for me, it was the message that this sent. Both the message that's sent and the false message it was based on. What gives the FDA the idea that this drug would only work on black people or that black people's either their reaction to the drug or their heart failure itself would be so peculiar, to use Samuel Cartwright's term from the 1850s about black people's bodies, that we're so peculiar that we need our own drug and you can't guarantee it would work on other human beings just because it works on black people? Where do they get that idea? I mean, that's the message I got from it, and many others did as well. Why are black people, over and over again, singled out as having bodies that work differently from all other human beings? That's the message I get from the EGFR that reports the results as non-African American, African American. So African-Americans can be singled out from all other human beings so that the results of the tests have to be adjusted just for us. And over and over again, black people are singled out as especially peculiar.

DR: 38:18

Now, race-based medicine applies across the board there. There are diseases associated with white people as well, with Asians. There's different kinds of calibrations for people of different races. But I'm telling you, the idea of bodily distinction and peculiarity applies mostly to black people. We get separated out from other human

beings in so many diagnoses and treatments in medicine. And the FDA, simply in hearing this kind of objection said, "Well, we're using self-identified race as a proxy for genetic difference." Well, where did that come from? Genes were not involved at all in the development of BiDil. They assumed that there was some gene or set of genes that made it work in these clinical trials, which, again, only had black people in it. Made it work for black people and that black people were genetically distinct enough that that could be a basis for approving the drug just for us.

DR: 39:46

Again, as I said before, I think, even if it's not articulated, this idea that race is genetic, which is just the modern version of God created the races, and then nature created the races, and now it's evolution created the races and so it's in our genes. But it's the same idea just borrowed generation after generation. And that idea, I think, is so embedded in thinking about race and science across the board, including by leading genomic and scientists and biomedical researchers and people at the FDA, that they can just assert it without any proof. That we just know this exists. And it's interesting because there's this idea that there are these folklore stories. That's just the way it is. That's the way it's always been from time immemorial. And that is adopted into science that's supposed to be so precise and evidence-based. It's really amazing. It's amazing. And it's so deeply embedded, not just in the technology, like the EGFR, where it's automatic and doctors just accept it, this automatic categorical adjustment for black people, but it's also embedded, I think, just in the general way of thinking about humanity and what makes people human and what is common about us and different about us, it comes out in so many ways that have nothing to do with scientific evidence whatsoever. It's folklore that is seen as acceptable in the highest echelons of medicine and science.

DR: 42:00

So I'll give you another example that comes to mind. There's an anthropologist Duana Fullwiley - I mention her work in *Fatal Invention* - who for her dissertation worked in genomic science labs of people who are looking for genetic explanations for racial differences in health. One scientist, in particular, was looking for the African gene that caused black children to have higher-- well, actually, Puerto Rican children, in particular, but black and Puerto Rican children have higher rates of severe asthma. And his theory was that because Puerto Rican children have a lot of African black in them that explains why they and black children have it. So there must be some African gene. Now, never mind all the research that shows that the conditions in poor African-American and Puerto Rican neighborhoods exacerbate asthma and that those children have less access to high-quality health care, but he's looking for the African gene anyway. But one thing that Dr. Fullwiley found in her research in the labs was that when the DNA samples came into the lab, they already came in marked by race. They were grouped by race when they came into the lab. So already you're starting from a racial framework, which is a big problem in a lot of this research.

DR: 43:43

There's an assumption of racial difference and then people look for the racial differences and low and behold they find them. And even if it's the tiniest amount of difference, they'll make a categorical

statement that black people as a race are different in this measure from other people. But anyway, one thing she found was that they called African or black DNA and white or Caucasian or European DNA opposites. Opposite DNA. Now, there is absolutely nothing scientific about calling black people and white people opposites or Africans and Europeans opposites. I mean, even if you want to look at it from a genetic level, first of all, all human beings descended from Africa, so all human beings have DNA that's a subset of African DNA. So you shouldn't be separating it in the first place. But if you do, why would you say Europe is the opposite? Europe is right across the Mediterranean from Africa. So wouldn't that be the closest? Because we know that genetic variation inclines gradually across the globe. So the closest should be the closest in geography. And they're right there. You can see Africa from the tip of Spain.

DR: 45:20

And I won't go into all the genetics of it, but there is some vast genetic variation on the African continent, the most of anywhere in the world, and there are people in Africa who are genetically closer to people in Europe than some other groups in Africa. So it's just nonsensical. It's ignorant. It's not based on any kind of evidence. It comes from these folklorist and racist ideas about black people's-- really, that we're subhuman. That's where it comes from. We can be distinguished from all other human beings because we're not really human. And I know that doctors who use these categories and these diagnostic tools that separate out black people would say, "Oh, no, but we're doing this for black people's health." Of course, we can point out as well all the ways it harms black people." But they'll still say, "I'm not racist. I'm doing it for their health." But if you think about it and you study it-- I mean, I actually don't think you need to think about it more than about five seconds, if you're open-minded. But if you need convincing, and you think about these ideas and where they came from, you would have to conclude they're racist ideas.

DR: 46:49

They're racist ideas. It's not them saying that anyone-- and this has to do with the meaning of racism as well. This is not saying that individual doctors have racist motivations to harm black people. But racism is not just prejudiced ideas. That's not even mostly what it is. It involves that, but it's not mostly. Racism is a political system of subordinating certain groups and giving power and privilege to others, especially one in the United States, white people, and especially if they're wealthy and men especially. But white people as a group in our racial hierarchy have that position of advantage and that's what racism is and that's what we have to fight against. And it's not about weeding out the doctors who have prejudiced ideas because most of them don't or they won't acknowledge it. You can't even necessarily see it in a test or in training because they know what to say. Even these tests are biased. If they if people really believe in their heart of hearts that this is how the world is organized, [you're going to see it?].

DR: 48:27

If we have been trained to believe, and I think this is true, the earth is round and we say the earth is round, it's not going to come out as we're prejudiced against the earth. It's just that that's we believe is the truth. And so what we have to do is include medicine in a

political movement to bring down the structures of racism and white supremacy and the way in which medicine incorporates those and promotes those. That's what we have to do. And it has to be in conjunction with broader social movements like the Movement for Black Lives that are dedicated to radically transforming our world into one where human beings are equally valued. And we are all human beings, right?

DP: 49:31

Yes. Yes. Professor Roberts, one of the things that struck me as you were talking was about the way that folklore about ourselves, about our history, is all mixed into these conversations. And many parts of my copy of *Fatal Invention* are highlighted, but one of them was when you talked about the slavery hypertension hypothesis, and particularly because I realized before I even arrived in medical school, that was something that I had internalized. I don't even know where I heard it. I don't even know where I heard it. But I'm pretty sure I had internalized it. I probably even told someone else that theory. And I think it's a particularly interesting one that probably a lot of folks who are listening to a podcast have in their head at some point. Would you talk to us about that? Where it comes from and the issues with it?

DR: 50:35

Yes. Yes. I'll just preface it by saying that I think you're absolutely right that people come to medical school with these folklore narratives in their heads that they believe are true. And like you said, you may not even know where you got it from. And I just want to interject very briefly the study of medical students and residents at the University of Virginia. A substantial number believed folklorish absurd stereotypes about black people's bodies. Like black people have thicker skin than white people. Black people have less sensitive nerve endings than white people. Now, where did they get that from? They came to medical school with that. But the problem is, then you come to medical school, and as you said earlier, every class reinforces black bodily difference. And so you're reinforcing these stereotypes about black people's bodies and other aspects of racial difference. And so, yes, you come to medical school. If you believe the slavery hypothesis, it makes sense because everything you're learning in medical school supports this idea that black people have hypertension because of some innate genetic or other kind of innate biological factor.

DR: 51:56

Sometimes in the studies, they'll say, "Genetic or other biological factor." They're very, very vague about what this might be. But it's some essence of blackness that somehow developed. And with the slavery hypothesis, the theory is that the reason why black people in America have higher rates of hypertension is because the gene pool of black people was affected by the Middle Passage, where it benefited enslaved people spending months in the horrific conditions of the slave hold in ships if they could retain salt - am I saying it right? I think so - they had a better chance of surviving. And so the black people who survived had this genetic predisposition toward retaining salt, which also promotes hypertension. So in other words, because of the conditions of the Middle Passage, blacks who

survived were predisposed to a condition that also, unfortunately, predispose them to hypertension.

DR: 53:27

Now, let me say something. Because sickle cell is so associated with black people, and sickle cell is a mutation that has a benefit in regions where malaria is prevalent but also has this negative effect if your parents have copies of the mutation, that you get a very painful and possibly deadly disease. And so there's this idea that only black people have these diseases that are good in some circumstances but deadly in others. And I've seen this hypothesis of explanations for even infant mortality in the black communities. That there's something positive about it, but unfortunately, it also has these negative effects. And I think the slave hypothesis is a similar idea that it benefited black people on slave ships, but it's harmful in the end when it comes to hypertension. Now, there are lots of problems with that hypothesis. One being that it is a supposedly genetic explanation for health inequities that are caused by unequal social conditions stemming from structural racism. So like all of these biological mythical theories, they divert attention away from the impact of structural racism and they divert attention toward coming up with some kind of race-specific therapy instead of ending structural racism. That's one.

DR: 55:21

Historians, geneticists, epidemiologists, I won't go into the details, but leading experts in all these fields have said, "No! This did not happen." And the other, to me, one of the most persuasive arguments against this being an explanation for high rates of hypertension is that other places where these slave ships landed with African people who endured the same conditions do not have these high rates of hypertension like Jamaica and other parts of the West Indies. If this were a condition caused by the Middle Passage, then why don't the descendants of enslaved people in other parts of the world have this problem? And there are all these theories to come up with why black Americans, in particular, are biologically predisposed to bad health because, in some cases, they have worse health than in countries in Africa, in the Caribbean, and the black diaspora all over the world. And so there's a scramble to say, "Well, why is it that black Americans are so unhealthy? Why is it? There must be some evolutionary explanation." Instead of just facing what is the obvious explanation, which is that racism is worse in the United States. That's so obvious.

DR: 57:06

That's the other thing about this. Shouldn't we go down the path of the most plausible, well-supported hypothesis? Why come up with a zany hypothesis that makes no sense and sometimes you can't even prove? I mean, one hypothesis that I quote all the time was a study that was reported in the American Journal of Obstetrics and Gynecology that was asking why it was that black women in America have higher rates of preterm births. Now, there are so many reasons why. The stress from racism. Lack of access to high-quality prenatal care. The care given to pregnant black women in labor. The neighborhoods that are unhealthy for growing up in because of lack of access to high-quality nutrition, housing. The violence of police officers and the stress that that produces. We could go on for another hour just talking about all the factors. Well, these

researchers ignored all of that. And their hypothesis was that black race, independent of other factors, causes extreme preterm births in black women. Why would you even want to try to prove that hypothesis? You can't prove that hypothesis, unless you control in the study for all these other factors, 10 of which I just named, but we could come up with hundreds of others.

DR: 58:51

And what does it mean to separate black race from all other factors? What does that even mean? What is black race in this study? What is the concept you're relying on in the study? Never mind how do you select the research subjects to include in the study. It can't be based on a social definition because you've excluded everything social, supposedly, from your study. And yet, of course, they based it on a social categorization. What is this factor you're looking for? How do you even describe what it is? Now, they ended up describing it in terms of genes, which they didn't study. They just speculated there must be some gene difference that causes it without proving that it had anything to do with genes or looking at genes. Not that that would have helped. But just the extent to which these ideas are backward, ignorant, absurd ideas can continue to circulate in contemporary medicine and biomedical research, and pharmaceutical development and treatment of patients. It's very alarming. Getting rid of those ideas is part of a broader anti-racist struggle within medicine and within our society.

UE: 01:00:32

Professor Roberts, one of the areas that just this past week has come up and I know you've written and spoken a bit about it, is how is race coming into our medical technologies and the algorithms that we use on the ward? So just yesterday, a new publication came out showing that black patients are nearly three times more likely to have lower oxygen levels go undetected compared to white patients. These are data that have been published in 2005. And so I'm hearing from colleagues say, "Well, should we change the guidelines around what a low oxygen level is for a black person versus a white person?" And wouldn't that be race-based medicine? And how does that kind of match with what we've just been talking about? I know how you think through some of those more nuanced discussions.

DR: 01:01:20

Yeah. Yeah. Well, again, I go back to the meaning of race and the fact that it's an invented social category. It is not a biological category. So there are lots of ways in which these algorithms cut. When there's an automatic adjustment for black patients, that is clearly based on a false concept of race. And there have been lots of studies that show how it can harm black patients, including one recently that Dr. Nayo was a co-author on, that showed that in the EGFR it has an actual impact of disqualifying black patients for specialized care and placement on a kidney transplant waiting list. So I mention those myths that the medical students at the University of Virginia held, and those were associated with undertreating black patients for pain. And we could go on and on about how these automatic categorical adjustments harm black patients and claimants in lawsuits. I mean, I won't go into the NFL, where there are black players who have been denied settlement payments because the tests for dementia for cognitive capacity is different that they use. Adjusts for black people, assuming that black people's brains

function differently. So that would take another hour to talk about. So there are those that harm.

DR: 01:03:06

Then, there are also supposedly race-neutral algorithms that exclude black patients or will disadvantage black patients. For example, the algorithm that's used to determine who gets scarce resources. It might be applied to ventilators in this pandemic. And so there because these allocation algorithms are based on the idea that the people who should get them are the healthiest people, the ones who are most likely to survive longer if they get the resource. That systematically disadvantages black patients because of structural racism. Black patients on average are going to score worse on these tests to determine their likelihood of survival and their length of survival. So I think we can-- I can't go into details about all of these, but I would say that the corrections that are based on a false biological concept of race, that adjust for black race because of an assumed biological difference by itself, that those should be abolished.

DR: 01:04:44

Now, what about algorithms that are going to disadvantage black people because of black people's experience of structural racism? I think that that's an ethical question that we could decide that there should be some kind of [bump up?] or some kind of reparations or affirmative action. We could come up with the terminology. But the idea is that there should be some kind of benefit or compensation given because of the impact of structural racism. So on the one hand, we have algorithms that are denying to a group that has been historically disadvantaged by racism access to care. That is wrong. That's wrong. The others maybe denying, as well, resources to black patients because of their experience of structural racism. And there hasn't been a lot of thinking about this, surprisingly. I mean, these algorithms are used without a lot of critical thinking about what is the ethical and just thing to do.

DR: 01:06:11

And so I think we do need to think about treating race as a political, invented category, and the people in that category have been harmed by racism. How should we take that into account in ensuring that that disadvantage doesn't perpetuate more disadvantage? So this is about thinking through, what are the questions? What are the meanings that we're using? I think if we're clear on that, on the values, on the understandings, we can engage in a conversation, a dialogue, a discussion about what's the right and just an anti-racist thing to do? That's very different from saying, "Oh, well, we've used race in the EGFR for 20 years. We'll just continue it." Because we know that black people, whatever the reason is, maybe it's their greater muscle mass, whatever it is, their bodies work differently. No! Forget that. We cannot continue down that path. If our focus is on anti-racism, and we see race as an invented political category that promotes racism, then we can have a different kind of discussion.

DR: 01:07:33

And we don't have all the answers now because, guess what? We haven't even started barely started engaging it. We don't know what the right measures are. Why? Because medicines relied on race for so long, it doesn't know what's right. I was inducted into the National Academy of Medicine in a year when we could all get

together and I participated in a workshop on what is the right amount of pain medication to give. And the discussion was focusing on the opioid epidemic. And I raised my hand-- I wasn't on the panel. I raised my hand and I said, "We cannot have this discussion without talking about racism in the prescription of pain medication, including opioids." We don't know what the right amount is because doctors were prescribing it by race. They were giving white patients more because they believed in myths, which were part of the marketing of opioids, that white people would not become addicted to them because of some innate immunity to addiction. Which is, again, absurd. Absurd. This is counter to reality, right? But anyway. That was part of it. And you can read Helena Hansen's work on this.

DR: 01:09:08

And on the opposite end, according to the idea of that black and white people are opposites, sometimes we are treated as opposites. We're not genetically opposite, but we may be treated. And in the case of opioids, black people were treated in the opposite way. There are studies that show, including a study of black children in the emergency room suffering from appendicitis and severe pain that showed that black children were far less likely to be prescribed opioid medication for their pain than white children. And we know that black people were less likely to be prescribed opioids for pain. Okay. So now we're stuck with the prescriptions being made according to race, and with a general idea, which is - it's controversial, but this is the reason that this discussion was going on at the National Academy of Medicine was that - there's an over-prescription of opioids for pain. What do we do about it?

DR: 01:10:22

Well, the truth is if there was an overprescription, it was an overprescription to white patients because of racist myths. There was an under prescription to black patients. So what's the right amount? What's the right amount? We don't know. We don't know the right amount. But don't have a whole discussion about it as if, "Well, let's look at the evidence and let's come up with an algorithm and let's look at logically what the right--" no. First, you have to confront the fact that the reason you don't know is because you were racist, practicing racist prescriptions. And so here's an example to me where race-based medicine has ruined this area of medicine. It's caused a controversy. It's caused a problem that we do not know what is the proper amount because of racism.

DR: 01:11:30

They may deny it. They may just say, "Well, we have to calibrate it properly. We overestimated the right amount." "No. It's because you prescribed according to race. And so you have an amount for white people and you have an amount for black people. And that was wrong. And now you don't know what is the right amount." But again, to figure out the right amount, you should not use race. You should look at, what are the factors that should determine the amount to prescribe? They can't be based on race. As I was saying earlier, that's like putting a square peg into a round hole. Race is not the answer to how you prescribe opioids. There's something, there must be indicators, that would tell a physician what is the right amount, like maybe how much pain the patient is in. But hat has

been determined by race throughout U.S. history. So even that has been ruined by race.

DR: 01:12:49

But once we, I think, start to think about, "How can we do this without relying on biological concepts of race?" That, to me, frees doctors and biomedical researchers to do a better job of figuring out how much medication to prescribe to patients. Figuring out the meaning of the EGFR and which numbers should suggest sending a patient to specialty care, which one should suggest that they get a kidney transplant. Now, on top of that, once we get rid of that - all that biological ridiculous ideas about race, out of the business of medicine - then, we also have to think about, what does it mean to be an anti-racist doctor? I mean, I shouldn't say make it in a sequence because they're all part of the same struggle. But I guess what I want to say is it's getting rid of and it also at the same time has to be transforming and creating an anti-racist medicine at the same time. But I think continuing race-based medicine is an impediment to doing that, and so it has to be part of an anti-racist struggle.

MO: 01:14:29

Professor Roberts, thank you so much for that. We've talked about so many things. I don't even know where to begin. But you walked us through your definition of race. We've walked through the history. We've walked through some of the politics, the harm of focusing on race-based medicine. And you also talked to us about coming back to this central question of what is race whenever we are confused about where to begin. Going back to making sure we understand that critical definition. And so that's so helpful, just as all your books are so helpful in clearing up some of these complex issues. I think that's something that I'll take with me beyond this episode. But one of the final ways that we like to end our episodes is by asking each of our speakers to tell our listeners who are going to go back into the clinical world tomorrow, what's one thing that they can take with them and start using right away?

DR: 01:15:40

Oh, now you want me to be a doctor? [laughter]

UE: 01:15:45

You can't just hold on to that award and not [crosstalk]. [laughter]

DR: 01:15:48

That's right. I have to make use of my membership and prove the worthiness of my membership in the National Academy of Medicine. I'm trying to think of what the one thing would be. Well, I think one thing would be, as you're practicing, you are getting rid of all you've been talking about taking race into account as if it were a biological category that you also think about, in what ways has structural racism affected my patient and what can I do about it? And I think there are lots of different ways you might want to do something about it.

DR: 01:16:45

It might mean asking the patient questions that you wouldn't have asked otherwise. It might change your view about why a patient is acting a particular way or not. What's affecting your patient? And as I'm saying this, I'm thinking, "Am I imagining a black patient only or even a patient of color? What about a white patient?" I think structural racism affects everybody. And so I think it's relevant, regardless of what race your patient identifies with.

DR: 01:17:46

But it also might mean doing things outside of the clinic as well. It might mean joining a particular organization or supporting an organization that's working toward an anti-racist society. It might be working on abolishing the EGFR in your hospital. It might be giving support to medical students who are working to change the medical curriculum various ways. But I think asking that question. Being really practically aware of how racism affects health so that it's not just an abstract concept. I've heard a lot of times when I've given talks to various audiences, including medical students and doctors, that-- and this applies outside of medicine as well. It applies in law. It applies in social work. It applies in lots of areas. It applies to academia. It applies to law professors and sociologists.

DR: 01:19:16

We think of these questions in the abstract and we abstractly understand that structural racism affects health and we leave it at that level. And I think, "How can we actually apply it? And as I was saying before, all of these questions, they're not ready answers to because these are new questions. I mean, W.E.B. Du Bois asked some of these questions in 1899, the Philadelphia [inaudible]. But they've been they have been asked but to be, you know, to be really seriously contended with and broadly contended with. I think we're seeing for the first time now and. We can't expect that the answers are right there. But once we are serious about answering these questions and doing something about it, we can start collectively to come up with ways that doctors can be structurally competent. What does that actually mean? Not just as a cool idea, the concept, but what does it mean on the ground, engaging with patients?

MO: 01:20:57

Yes. Thank you so much for sharing that. And I was going to just end with one closing reflection. I was watching one of the talks that you gave, Professor Roberts, and you closed one of the lectures with a quote from the science fiction author and the mother of Afrofuturism, Octavia Butler. And you said that there's nothing new under the sun, but there are new suns. And that was very profound for me for a couple of reasons. Number one, because I think Octavia Butler and that you chose her and that quote is really meaningful. And for our listeners who aren't aware of that history, she was a science fiction author, an African-American author, who was, I think, in ways, ahead of her time.

MO: 01:21:46

But in her genre, speculative fiction, she talks about how she was so enchanted with this genre because it was a space where she had no rules, no closed walls, where she could imagine anything, and that she could write herself into worlds that don't exist. And I think that that's really powerful as we think about what it really means to reimagine. And I think even as we have these discussions, another thing that I've just taken from your work is, as you mentioned, some of these questions are old. They're not new. These issues of racism are persistent. But the fact that we've broken down that race is invented, that it's been built, it makes me feel hopeful that the repercussions of all of that can also be deconstructed. And so that means it's not inevitable. And I hope that's what people take away from some of this as well as we strive towards justice and we find our new suns. So thank you for all of your work in that space.

DR: 01:22:54

Thank you. That's a beautiful closing. I'm glad that you quoted those words from Octavia Butler because they're very special to me. Yes, we've seen it all, it's persistent, but we can imagine a radically different world. And you're right that acknowledging that race was invented by people, it's not in our nature. It wasn't created by God or evolution. That means we can dismantle it, and we can think about what it means to be human in our relationship to other human beings in a radically different way. That is so inspiring and liberating, isn't it? Yeah. So I agree. I appreciate those words. [music]