

AN INTERVIEW WITH...

Quinn Capers IV, MD, FACC

Dr. Capers discusses the importance of diversity in the physician workforce, how to recognize and counteract unconscious bias, how he led the change at Ohio State to a radial-first cath lab, and more.



You've shared that you always knew you wanted to be a doctor—what was it that drew you to interventional cardiology specifically, and what is your favorite part of that work?

I fell in love with the heart and cardiac physiology in my first high school

biology course. From the ninth grade on, I knew I had to become a “heart doctor.” Although most students enter medical school unsure of their ultimate specialty, I walked in the front door envisioning myself as a future cardiologist. During my third year of medical school, I witnessed my first coronary angioplasty procedure. I still remember watching from the control room while a cardiac nurse narrated for me: I saw a severe blockage in a coronary artery, a tiny balloon was inflated, and on the next angiogram the blockage had disappeared! I was instantly hooked and thrilled with the prospect of using my skills to repair the heart in an alert patient.

Three things I learned in medical school confirmed that interventional cardiology was my destiny: (1) heart disease is the leading cause of death in the United States, (2) heart attacks are responsible for a large number of those deaths, and (3) interventional cardiologists are the doctors who treat heart attacks. I have never regretted my decision.

Under your leadership at The Ohio State University College of Medicine, the college was nationally recognized as among the most diverse student populations in the United States. What impact does diversifying the physician workforce have on national health?

Diversity in the physician workforce is critically important for several reasons. The population is growing more diverse and, due in part to a legacy of mistreatment by the health care system, minority patients tend to engage more in their health and health-promoting behaviors when they interact with minority

physicians. Also, studies show that the following are true with regard to diversity in medicine:

- Medical students and physicians (of any race) benefit from working with diverse colleagues; it increases everyone's cultural competence and humility. White doctors who trained in diverse environments rate themselves as more comfortable treating patients of all backgrounds.¹
- In several recent studies, it has been demonstrated that Black patients are more likely to consent to vaccinations, invasive blood tests, and heart surgery when recommended by Black physicians.^{2,3}
- Minority patients rate their interactions with race-concordant physicians as more “patient-centered” and compassionate.⁴
- In an examination of physician results on the implicit association test (IAT), Black physicians were least likely of all groups (including White, Asian, and Hispanic physicians) to harbor negative implicit racial biases.⁵
- Medical research performed by diverse research teams has a higher impact (by number of citations) and is more likely to be successful at recruiting diverse study patients and addressing the needs of a diverse population.^{6,7}
- Minority physicians and physicians from disadvantaged backgrounds disproportionately choose to serve underserved and disadvantaged communities.⁸
- Several studies suggest that women physicians may outperform men in terms of providing evidence-based, guideline-driven care (to the benefit of patients).⁹
- Many experts feel that one strategy to reduce racial and gender health care disparities is to diversify the physician workforce.

Essentially, diversity benefits all doctors and all patients by leading to innovation, excellence, and improved care for all patients.

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Along those lines, we'd like to discuss your work related to implicit biases, a subject you've tackled head-on with the admissions team at The Ohio State University College of Medicine, explored in multiple published works, and led educational workshops on nationwide. First, how would you define "implicit bias"? Second, what would you suggest as the best way for physicians to begin to recognize and counteract these unconscious biases?

Implicit bias is the phenomenon in which our unconscious brain forms "associations" of certain demographic groups with positive or negative attributes. These associations are based on exposure to images or stimuli and are made outside of our conscious awareness, but they can influence our behavior. For example, if I often see young Black men in hoodies committing violent acts (whether on the news, in the movies, in books, music videos, or in real life), my unconscious mind may associate young Black men in hoodies with "danger." I might feel quite differently consciously, but this unconscious association could influence how I treat people in this group. I may be curt or less likely to smile and make eye contact, and I might make clinical decisions that put them at a disadvantage. Studies have shown that physician implicit bias could impact clinical decision-making, and this could impact decisions on medical school admissions and selection for residency and fellowship training programs.

There are several research-proven strategies to override or mitigate implicit biases when interacting with individuals. I have written about some of these in my work at Ohio State, as have many others. Probably the best way to guard against developing implicit negative biases is to make the extra effort to be exposed to as many types of people with as many different philosophies as possible. When we expose ourselves to people of a different race, gender, sexual orientation, religion, skin tone, physical ability, etc., we ultimately see admirable characteristics in all people. This guards against forming entrenched negative associations with certain demographics. The IAT is a computer-based exercise designed to uncover unconscious associations. All doctors and health care providers should take the IAT or another test to uncover their implicit biases and then work to mitigate them.

What health disparities do you see in the interventional cardiology realm, and what can be done to address them?

Studies have documented several racial disparities in interventional cardiology care.¹⁰⁻¹⁴ Compared to White patients, Black patients with heart attack symptoms are less likely to undergo cardiac evaluation. Once evaluated with catheterization and found to have critical coronary lesions, Black patients are less likely to be treated with state-of-the-art drug-eluting stents and less likely to be discharged on guideline-directed medical therapy. Regarding structural heart interventions, Black patients with critical aortic valvular stenosis are less likely to be referred for transcatheter aortic valve replacement (TAVR). For critical limb ischemia, Black and Hispanic patients are less likely than White patients to be treated with limb-preserving revascularization procedures and more likely to have limb amputations, even when controlled for extent and severity of disease at presentation. Finally, studies have shown that Black patients treated for ST-segment elevation myocardial infarctions tend to have longer door-to-balloon times, meaning they are less likely to achieve the best myocardial salvage and outcomes.

These disparities are multifactorial, and it will take a multipronged approach to reduce them. Some important strategies to reduce these disparities include having hospitals participate in quality-improvement programs that penalize hospitals for not following guideline-based care; having under-resourced hospitals partner with well-resourced, major medical centers for treatment protocols; and enhancing diversity in the specialty of interventional cardiology. We need to work on these solutions simultaneously.

The COVID-19 pandemic has forced physicians to adapt, such as the introduction of technology that allows for remote programming of a pacemaker at Ohio State's Wexner Medical Center. In what ways have you adapted your protocols in the cath lab during this time, and do you see these new methods continuing postpandemic?

As of this writing we have not adjusted our interventional cardiology care significantly. However, I do see a role for telehealth to improve compliance with guideline-based care. A quick, convenient televideo visit with a patient to ensure they are taking their

postintervention medication (such as antiplatelet therapy) could be very helpful. Future innovations may include implanting hemodynamic-monitoring devices (as is routinely done in patients with recalcitrant congestive heart failure) in patients with critical aortic stenosis to remotely manage their heart failure and help with timing TAVR referral.

How did you lead the transformation to a radial-first cath lab at Ohio State? What are your thoughts on some of the emerging alternatives to radial or femoral access for cardiac catheterization?

I had been trained in transradial coronary procedures as a fellow at Emory University and began performing them at Ohio State as soon as I arrived in 2007. It took about a year and a half for my colleagues, some of whom were occasionally performing transradial procedures already, to notice that I was doing them at a high rate and ask why. I led several discussions at our interventional case conferences about the superior safety of the transradial approach, but it was ultimately looking at our own data that proved to be the turning point. When I reviewed our data that showed patients treated with the radial approach had lower cardiac and access site complications, it was an easy group decision to make radial access the default approach. So, it was a consensus driven by reviewing both national studies and our own data.

Some are now advocating a “distal radial” approach, which involves accessing the artery more distally, in the anatomic snuffbox just above the thumb. From my perspective, this appears to have passed what I call the “feasibility phase” (ie, many operators have shown that it can be done). I am waiting on evidence from the “incremental benefit” phase (ie, does it improve on what we are already doing?). I am watching with interest!

The femoral approach will always be an important aspect of interventional cardiology. I am pleased that significant progress has been made in enhancing the safety of femoral punctures. This includes the use of micropuncture needles, ultrasound imaging and fluoroscopy to obtain an accurate location of the safest puncture site, and possibly the use of closure devices (although at this time the data are mixed on whether these reduce complications). I am proud to be in a specialty that is continually exploring ways to make our procedures safer.

In a study you and colleagues published earlier this year with *Coronary Artery Disease*, it was determined that during the first month after acute myocardial infarction, readmissions occur in more than one in 10 patients.¹⁵ What effect does this have on the health care system, and what needs to be done to reduce these readmissions?

Readmissions are psychologically distressing to patients and their families and a tremendous burden on the health care system. Social determinants of health such as safe neighborhoods, access to healthy food, and environments free from cigarette smoke play a major role in cardiac disease in the first place and are very likely to play a role in readmissions after a myocardial infarction. We need to work with community agencies and social workers to improve postdischarge access to cardiac rehabilitation programs, education about medications and their importance, and assistance paying for medications, as well as to provide access to doctors or advanced practice professionals, perhaps via tele-video appointments. There is a window of opportunity, probably in the first 24 to 48 hours to troubleshoot and answer questions early in a patient’s postdischarge course. When these questions or concerns go unanswered, patients are more likely to return to the hospital. I also suspect that the not-so-subtle pressure to reduce length of stay from third-party payors can (and has in some instances) backfired. When we attempt to get our length-of-stay metric down, we sometimes discharge patients before they are psychologically and, perhaps, medically ready. This inevitably leads to some of our most vulnerable patients returning to the hospital.

Anyone who follows you on Twitter can attest to the ways you use social media to inspire change, including your creation of the popular #BlackMeninMedicine hashtag. What was your inspiration behind the hashtag and what do you hope to achieve with it?

I am glad to have the opportunity to say that the creation of the #BlackMeninMedicine Twitter campaign was a group effort; it was not just me. Colleagues around the country were a part of the group effort, including Drs. Cedrek McFadden, Cedric Bright, Alden Landry, Darrell Gray, Dale Okorodudu, Andre Campbell, Robert Higgins, and many others. In November of

2017, these and several other Black male physicians on Twitter were lamenting the findings published by the Association of American Medical Colleges that the number of Black men applying to medical school had been low and stagnant for nearly 40 years.¹⁶

We discussed strategies to reverse this trend and avoid or ameliorate the coming crisis-level shortage of Black male physicians. Our idea was to flood social media with images of Black male doctors, with stated objectives to (1) inspire young people to pursue medicine, (2) speak out against injustice, and (3) change the nation's unconscious bias about Black men. Within the first several days there were several million impressions on Twitter, indicating a significant impact and awareness. We want people to be comfortable with the idea of Black male doctors and we want to multiply our numbers many times over. We encourage your readers to follow the Twitter hashtag and post images that encourage diversity in medicine. ■

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Disclosures: None.