Cardiovascular disease is the leading cause of death in the United States, claiming more lives than all forms of cancer combined. Heart disease and stroke are among the forms of cardiovascular disease. In 2019, nearly 900,000 people died of cardiovascular disease in the United States, according to the American Heart Association. In Georgia, about 1 in 3 deaths are caused by cardiovascular disease, according to the Georgia Department of Public Health. Most of these deaths are premature and preventable. Atlanta Business Chronicle recently talked with a panel of experts from Wellstar Health System and the American Heart Association about ways to accelerate heart care progress through diversity and inclusion and finding better ways to fight heart disease through unconventional methods, early detection and education and through the workplace. (Remarks edited for clarity and brevity.)

**Finding Better Ways to Fight Heart Disease and Accelerate Cardiac Care Progress**

David Rubinger: What is the best way to define heart disease? And what does it mean for our culture?

Dr. Vivek Nautiyal: Let me start by saying that heart disease or cardiovascular disease is a very broad term which includes a wide variety of conditions affecting our heart and our blood vessels. The most common heart disease is coronary artery disease, which is caused by cholesterol plaque clogging the arteries supplying blood to our heart. This is the number one cause of death in the U.S. and across the world.

Some other types of heart disease include heart failure, wherein the ability of our heart to pump efficiently is impaired. Valvular heart disease that includes aortic aneurysm; heart rhythm disorders that affect the electrical activity of the heart; and disease affecting the neck arteries going to a brain or the arteries supplying circulation to our legs. All of these would broadly come under heart disease.

These conditions affect the ability of the heart to function properly and can lead to serious health problems such as heart attacks or stroke.

Rubinger: How much of that would we consider to be genetics and how much would we consider to be lifestyle, leading to the disease itself?

Nautiyal: Genetics is important, but I would say the vast majority are lifestyle-related. And that is why it’s killing so many people. Heart disease is often the result of lifestyle factors like poor diet, lack of exercise, mental stress. About four in 10 U.S. adults currently are obese. Three in 10 have high cholesterol. Four in 10 have hypertension. One in 10 have diabetes. So, this is an epidemic. Adolescent and childhood obesity is on the rise and we are sitting in the diabetes belt in the U.S.

Lack of awareness of these common risk factors often leads to delay in seeking preventive or medical care. You can have hypertension, high cholesterol, and diabetes for years or decades without knowing, which is why they’re called silent killers. Unless you check for them, you may be blissfully unaware of your risk, until one day it leads to a major event. Rubinger: It’s very common to hear about examples where sometimes it can be genetic and other times it can be a lifestyle cause. Dr. Sacks, in your career, how have you viewed this whole conundrum of how to best approach heart disease?

Dr. Harvey Sacks: Getting back to your previous question, one form of heart disease we did not mention is congenital heart disease — malformations of the heart and blood vessels which occur at birth. As regards to lifestyle, when I started practicing cardiology, I saw patients in Paulding County. At that time, it was a rural community, but it is not so rural anymore, but rather an extension of Atlanta. Many members of that community had a lifestyle consisting of poor dietary habits, lack of exercise, cigarette smoking and use of smokeless tobacco.

We began an educational process to teach people about healthy living. We socialized this into the community by giving talks to schools, churches and Rotary Club meetings. The community bought into these new concepts, and we have made great progress. We have made significant changes as a result of this education in heart attack rates and cardiac mortality in that community.

Rubinger: Do we have any data to support that?

Sacks: We do. Since we have been seeing patients in Paulding County, data show a decrease in cardiac mortality. People understand the risk factors that contribute to the development of heart disease. And this trend is not unique to Paulding County. Similar efforts have been successful throughout the country. The American Heart Association (AHA) has helped us to educate millions of people, and as a result, people are adopting healthier choices.

Unconventional weapons: Collaboration, technology & more

Rubinger: From a medical standpoint, what have you learned from research that has helped deliver better outcomes?

Nautiyal: As Dr. Sacks was mentioning, we have made huge advancements in improving cardiovascular mortality and morbidity, especially in the Medicare population. There’s clear evidence of that in the last two decades. One area where we are lagging behind is in the young population. Unlike the older population, in the younger population the event rates are either flat or going in the wrong direction, going up.

One of the reasons for this is that traditional risk factor calculators tend to underestimate cardiovascular risk in young people. By young people, I mean below 50.

—DR. VIVEK NAUTIYAL, CARDIOLOGIST, LEAD OF PREVENTIVE CARDIOLOGY PROGRAM WELLSTAR CENTER FOR CARDIOVASCULAR CARE

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“The traditional risk factor calculators we use tend to underestimate cardiovascular risk in young people. By young people, I mean below 50.”

Another area where we in the U.S. lag behind is utilization and adherence to easily available life-saving therapies. A recent study showed that in over 600,000 commercially insured patients with established cardiovascular disease in the U.S., the utilization of appropriate lifesaving medications, such as statins, was low, despite overwhelming evidence of the benefit and established clinical guidelines. Only one in five patients received appropriate high-strength statins, despite these being relatively inexpensive generic medicines. Younger patients and female patients were less likely to receive these therapies. Furthermore, patient adherence, as measured by prescription refill rates, was low.

To better understand some of the factors behind this and also improve our quality of care, we at the Wellstar Center for Cardiovascular care are honored to have been chosen by the American Heart Association, to be one of six health care organizations across the country to participate in an integrated cardiovascular cholesterol management initiative, a learning collaborative grant. As part of this initiative, we will track patients admitted with heart attacks and follow them as they transition home. We will pilot programs to get patients to their treatment goals within a short time after discharge and improve patient outcomes.

Rubinger: Mr. Mooney, why aren’t people taking their statins? Is this decision-making electronic tool called CV Prevent Choice in our primary care offices. This enables the patient and physician to have a discussion about their personal risk for heart attack over the next 10 years. It shows in an easy-to-understand graphic the impact of lifestyle measures, like healthy diet and exercise and — if needed — medications, in reducing their cardiac risk. We collaborated with the Mayo team to include factors on this risk calculator, like family history, women-specific risk factors and coronary calcium score, which alerts the clinician and patient that actual risk may be higher than indicated.

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I believe so. The idea was that we can really influence people’s lives greatly by being able to do that technologically by virtual visits. Rubinger: And virtual medicine was something really born out of the pandemic. Is the concept of virtual medicine here to stay? Nautiyal: I believe so. The idea was there before, but the pandemic forced us into implementing it in a very short time span. Now I think it’s going to stay, but in a hybrid model. In-person conversations and physical exams still have meaning in spite of all the technology. An example of a hybrid model would be if someone was hospitalized recently for heart failure and now needs frequent visits for adjusting medications, they don’t have to come in every time. We can do virtual visits to adjust the medications and get them to their goal.

Prioritizing early detection Rubinger: You mentioned earlier younger people who may think they’re invincible. These are the people who need to learn about early detection, earlier on in their lives. What is the recommendation you all give to the younger population to start monitoring their own heart health to know whether they need help? What are the steps younger people need to take to make sure they are addressing these issues? Nautiyal: I would like to highlight two key groups who are at a very high risk of heart attacks or strokes. One is familial hypercholesterolemia. This is a genetic condition where you have high cholesterol levels since early childhood. The way to identify this is to know your cholesterol numbers and know your family history. Familial hypercholesterolemia, FH for short, is not as uncommon as we thought. One in 250 people who have FH, and only about 20% of people with FH have been identified or recognized. This leaves a vast reservoir of undiagnosed and undertreated people.

If you are a man with untreated FH, there is a 50% chance of having a heart attack by age 50, that is basically a coin flip. Women with untreated FH have a one in three chance of heart attack by age 60.

The second group is people with family history of premature heart attacks or strokes. If you are in one of these groups, I would strongly urge you to seek preventive cardiology consultation. Regardless of whether or not you belong to one of these two groups, I cannot emphasize enough the importance of following a healthy lifestyle pattern, exercising regularly, not smoking, getting adequate sleep and knowing your numbers — blood pressure, cholesterol and sugar levels. On a positive note: know that your DNA is not your destiny. If you treat FH adequately early on in life, you can have a healthy and long life without any cardiac complications, without any problems. Similarly, and this has been well studied, even among people who have a cluster of genetic mutations predisposing them to heart attacks (high polygenic score), following a heart-healthy lifestyle can reduce their risk by 50%. Again, your DNA is not your destiny.

At Wellstar, we also offer a robust ‘Know Your Heart’ screening program for the general public to schedule an appointment. The advanced version of this includes a CT coronary calcium score. For specialized care, we have a Preventive Cardiology office, where we offer evidence-based, patient and family-centered care with a multidisciplinary team including a cardiologist, dietician, clinical pharmacist and geneticist. Our cardiovascular genetics program has the highest volume of patients in Georgia.

Mooney: Through programs like Kids Heart Challenge at the American Heart Association, which partners with schools to help prepare children for success by empowering them to embrace a healthy lifestyle — eat well, move more and stay tobacco free. The Kids Heart Challenge prepares elementary students for future success both physically and emotionally. Through cardio-pumping physical activities, kids learn the importance of being heart-healthy. Participating schools and/or teachers receive discounted certificates for PE equipment, direct contributions to their school and new curriculum resources for whole-child centered learning. Healthy students are better learners; Teachers and schools have a major influence on students’ health, and the Kids Heart Challenge is designed to support and improve those efforts. One other AHA program, Target BP (blood pressure) using the M.A.P. (measure accurately, act rapidly, partner with patients, communities) Framework is connecting the community to clinics. This program here at the American Heart Association is designed...
When we started the true blood pressure readings are, clear big picture of what the patient's up appointment. Doctors have a real comes from that (screening) to a follow-up systems. It's all about time: the patient when they check their blood pressure, hypertension research project that access to medication.

Education to reduce the numbers

Rubinger: Education about cardiovascular disease risk factors clearly plays a big part in helping people avoid making bad decisions. What programs or initiatives have had the biggest impact?

Sacks: If you identify a group of people that we have significantly impacted, it is women. Mr. Mooney can speak to this too. You know if you ask a woman what is she most likely to die from, she will probably tell you breast or uterine cancer. But the truth is she is most likely to die from heart disease. The AHA has highlighted this with their Wear Red Day events and other programs. Women have come to understand their cardiac risk, and that their symptoms of heart disease may differ from those of men.

Mooney: I would agree with you on that. The information, as it relates to women dying of heart disease, is really the approach of addressing social determinants of health.

And quality improvements are really about self-management. For example, with the blood pressure project, it is a way of educating the patients, empowering the patients to take control of their blood pressure through what the doctors have shared with them. Talking to and educating these patients, as in the example Dr. Sacks gave in Paulding County, helps them know what are those factors that impact their health: such as healthy eating, access to care, also access to medication.

Rubinger: Education is critical in this hypertension research project that these populations would not have had access to blood pressure monitors outside of the doctor's office to get true blood pressure readings. That's self-measurement. Now these devices, when they check their blood pressure, it automatically links up into their EMR systems. It's all about time: the patient comes from that (screening) to a follow-up appointment. Doctors have a real clear big picture of what the patient's true blood pressure readings are, and that's where it goes into better treatment plans as it relates to physical activity, diet, and so forth.

Sacks: We're dealing with lifestyle-change-oriented pharmacists in predominantly African-American owned barber shops. They obtained blood pressures on the patients. A large number of men, with no prior medical history, were found to have significant hypertension (high blood pressure). These individuals were then placed on medication. It was an amazing study because, in some workshops with patients and the community, we may use infographics of a home water hose connected to a street fire hydrant as an example of blood vessels to the heart and/or a boxer beating the kidney to give a visual what high blood pressure does to the body organs. Giving the visual, just keeping it simple and straight to the point.

Rubinger: It's all about trust, right? They have to trust the message. There are certain communities that in the past have not trusted the medical establishment. Mooney: Absolutely. That's why we are such a big proponent of diversity in the workplace and bringing young scholars, HBCU scholars, historical black institutions and biomedical students into this arena, connecting them with cardiologists and scientists throughout their undergrad, up into medical school and up into their careers. That's key. And that's important because getting out there in the community is key to building that trust. People trust people who are very familiar with their environment.

Mooney: Yes, the American Heart Association is all about: bringing awareness on heart disease to rural and urban communities and vulnerable populations. We are developing science-based tools and resources for clinicians and providers to keep them informed with the current research and what's going on out there, as well as providing educational tools in all languages for their patient population.

We discovered that patients heard the numbers but didn't know what they meant and didn't know how they impacted their bodies. We design educational materials for these patients to really understand the consequences of high blood pressure for any literacy level. Because, in some workshops with patients and the community, we may use infographics of a home water hose connected to a street fire hydrant as an example of blood vessels to the heart and/or a boxer beating the kidney to give a visual what high blood pressure does to the body organs. Giving the visual, just keeping it simple and straight to the point.

Rubinger: That need to build trust between the medical profession and certain communities leads us to another issue: the disparity in different groups when it comes to obtaining medical care. How can our cardiac experts help close the gap in this area?

Mooney: The AHA has put a lot of money and research and grants focused on science-based solutions to address health inequalities through, for example, our Health Equity Research Network on Prevention of Hypertension. I'm researching-focused on cardiac and oncology working in underserved communities and bringing forward awareness of the connection of heart disease and cancer, as well as putting our money back into the community to support community-based organizations that are addressing social determinants of health that could assist with improving overall cardiovascular health as it relates to addressing food insecurity, vaping advocacy work that we do in school systems and throughout the country and also where we are invested into people. We're working with our historically black colleges and universities, identifying those underrepresented in the medical field and working to get them to also become representatives in the medical field to help improve overall health in communities throughout the nation. Winning in the workplace

Rubinger: How important is the employer towards helping deliver on some of these messages to their employees?

Sacks: From the business standpoint, employers need to offer more health and wellness opportunities for their employees. And why is that? Because if they do, their workers will spend more time at work and less time at home, sick. They will spend less time in the emergency room because of adopting a healthier lifestyle and medical conditions will be identified sooner. The more businesses can promote these types of internal programs, the more the employee realizes, ‘my employer really cares about me, they really want me to be healthy.’ It is a win-win for everyone, so these programs need to be more widespread and open to more people.

Mooney: The American Heart Association has workplace programs where we work with employers throughout the nation and throughout Georgia. Also we work with organizations in terms of broadening or expanding the pool of applicants, or those in leadership, to be able to be a representation of the community in which they serve, a true representation of the community in which they serve, so that the issues are brought to the table and they are addressed.
John Petrick loves the simple life. The feeling of warm wood under his table saw, crisp wind in his face during his morning bike ride and the spin of the reel on his fishing rod when he’s hooked a “big one.” Perhaps he revels in simplicity because, beneath the surface, John’s heart health is rather complicated.

Between diagnoses of ventricular tachycardia (VT), atrial fibrillation (AFib) and congestive heart failure, one thing is certain – John’s heart is, by his own definition, “an odd puzzle.” So when he needed a health provider who would truly listen and care, John chose Wellstar.

There, his primary care physician referred him to an entire team of heart care experts – a cardiologist, two electrophysiologists, an advanced heart failure and transplant cardiologist and a cardiac psychologist – who all work together to keep John’s entire health in check. That way, John can focus on more important things – like going fishing.

wellstar.org/heartcare