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Hypertension Across Diverse Populations: Practical Strategies for Equitable Care

Announcer:
You're listening to *Heart Matters* on ReachMD, and this episode is sponsored by Mineralys Therapeutics Inc. Medical Affairs. Here's your host, Dr. Alexandria May.

Dr. May:
Welcome to *Heart Matters* on ReachMD. I'm Dr. Alexandria May, and joining me to explore how hypertension presents and progresses across diverse populations—and what that means for patient care—is Dr. Keith Ferdinand. He's the Gerald S. Berenson Chair in Preventive Cardiology and the Director of Preventive Cardiology at Tulane University School of Medicine in New Orleans. Dr. Ferdinand, thanks for being here today.

Dr. Ferdinand:
Oh, it's my pleasure.

Dr. May:
To start us off, Dr. Ferdinand, why is it so important for clinicians to recognize variation in hypertension among different patient groups?

Dr. Ferdinand:
Well, the first thing we should all recognize is that across the modifiable risk factors, high blood pressure, specifically systolic blood pressure, is the most common. Almost 50 percent of US adults have elevated blood pressure, and if you look at the older population, including persons who have cardiovascular disease and increased cardiovascular risk, it's even higher.

So it's important to address high blood pressure, but it's also important to recognize those patients who may present with some different forms of hypertension, including one called resistant hypertension.

We now think aldosterone is central to high blood pressure, especially in those who have more severe and resistant hypertension, and may be more common in certain populations, including African Americans. The exact reason is unclear, but aldosterone is linked to an increase in sodium, loss of potassium, vasoconstriction, and left ventricular remodeling, along with chronic kidney disease, all of which are directly related to an increase in cardiovascular disease and uncontrolled hypertension. The 2025 high blood pressure guideline actually suggests that clinicians may want to check for elevated aldosterone via an aldosterone renin activity level in any patient with stage two blood pressure—that's 140 over 90 or above—and also in patients with secondary hypertension.

How common is dysregulation in aldosterone in patients? Well, the data are mixed, but they generally suggest that we're greatly underestimating the persons who have elevated aldosterone, especially in patients with stage two hypertension, obesity, and chronic kidney disease, and it's more common in African Americans. Elevated aldosterone may be a central link to an increase in blood pressure and cardiovascular kidney disease.

Aldosteronism is much more common than many clinicians recognize and may be found in as much as 20 to 25 percent of persons with stage two hypertension and more common in patients as a form of secondary hypertension who also have chronic kidney disease and obesity, and is seen more commonly in persons who identify as African American.

Dr. May:
Given that importance, what are some of the key differences we see in hypertension prevalence and outcomes across racial and ethnic populations?

Dr. Ferdinand:

Well, if you look at the map of the United States, it'll be very evident that there's something going on with hypertension that's related to the social determinants of health. I like to use the term 'social drivers' because determinants makes it sound like we can't do anything about it.

Social drivers of health are where people work, live, play, and pray. It's the built environment. It's the daily stress. It's having insurance or having limited access to a primary source of care and limited referral to specialists. All of these factors come into play with not only the prevalence of high blood pressure, but the severity.

Dr. May:
And if we look beyond biology, can you tell us how factors like geography and socioeconomic background shape patient risk and experiences?

Dr. Ferdinand:
Well, we know that there may be some genetic factors. We often discuss salt sensitivity, where some people have elevated blood pressure with excess intake of sodium. There's also a gene called APOL1. It's more common in people of Sub-Saharan African descent, and this particular gene tends to damage the kidneys. But that really doesn't explain those profound differences we see in geography.

I think it's mainly related to having insurance or limited insurance, lifestyle, and something we call the Southern diet—it's not my term. The REGARDS study, a large epidemiologic survey, showed that the type of foods that they eat in the South—high in sodium, saturated fat, sweet tea, etc.—may be related to an increase in high blood pressure. Physical inactivity, obesity, and stress are also factors.

There's also a concept called weathering. People who are disadvantaged are always limited in an environment where they have the opportunity to seek care, pay for care, and get appropriate care.

Dr. May:
For those just tuning in, you're listening to *Heart Matters* on ReachMD. I'm Dr. Alexandria May, and I'm speaking with Dr. Keith Ferdinand about how hypertension presents and progresses differently across patient groups.

So, Dr. Ferdinand, I'd like to take a closer look at what these differences mean for real-world care. How should social determinants of health inform our approach to screening and diagnosis?

Dr. Ferdinand:
These are really important because it's not just a social issue; it's a practical issue. What do I mean? We know it's more common in the non-Hispanic Black population; it's more common in people who are disadvantaged. It's more common in the South, but we also see this in certain urban and rural populations, so it's not necessarily related to genetics or self-identified status as Black or Hispanic. It's having those social drivers of health, which are adverse in terms of blood pressure: the ability to seek care, pay for care, and follow up.

The reason it's so important for us as clinicians to recognize this is the concept of triage. It comes from 1918 in World War I, in which American soldiers would find which ones on the battlefield needed immediate medical servicing. Well, we need to triage our patients with hypertension. Patients who have excess body weight, chronic kidney disease or what we call now the cardiovascular-kidney metabolic syndrome, patients who are disadvantaged, have lower health literacy—I'm not talking about intelligence, but understanding how to manage the complex conditions they may have—not having transportation, not having an identifiable source of primary care and not getting referral to specialists when they develop some of the secondary components of uncontrolled hypertension or what I also call resistant hypertension—those are persons who may be taking their medicines, three or more medicines, including an ACE inhibitor or an ARB, long-acting calcium channel blocker, or a diuretic, but they still have blood pressure higher than 130 over 80, which we now consider appropriate. Those patients need special care. They need to be triaged.

Dr. May:
With so many factors at play here, how can clinicians approach treatment decisions in a way that's both individualized and equitable?

Dr. Ferdinand:
Well, first of all, the bedrock of treating high blood pressure is lifestyle. I call it therapeutic lifestyle changes. It includes limiting sodium intake by at least 2,300 milligrams a day, but ideally less than 1,500 milligrams. Increasing potassium in those patients who don't have significant CKD will lower blood pressure. The surrogate for that is the DASH diet. It's low in sodium, high in fresh fruits, vegetables, lean sources of protein, and low-fat dairy.

Regarding physical activity, the American Heart Association suggests 150 minutes a week, but we now also suggest adding resistance activity. Looking at meditation and yoga in the new guideline—and I was vice chair of the 2025 ACC/AHA multi-society high blood pressure guideline—for the first time we say you may want to consider that. Now, there are some moderate short-term evidence that

moderate use of yoga and meditation will help lower blood pressure, but I think for many patients, it's not going to be the final solution. And of course, address excess body weight and obesity, both with team-based approaches and with pharmacotherapy if needed.

Now what we do recommend in patients who don't yet have cardiovascular disease, but after three to six months, if these therapeutic lifestyle changes, this life modification, has not lowered blood pressure to less than 130 over 80, consider medications. Why? Because things fall apart. Even people who are successful early on with lifestyle, later, the blood pressure will regress towards hypertension. And after three to six months, if you don't do anything, the blood pressure may worsen and go from stage one, which is 130 over 80, to stage 2, 140 over 90 or higher, and that will lead to an increase in target organ damage.

So yes, lifestyle is the bedrock. It's the first step, but we should not be afraid to use the identifiable, beneficial medications, including angiotensin-converting enzyme inhibitors, or ARBs, long-acting calcium blockers, and thiazide-type diuretics.

Dr. May:
As we come to the end of our program, Dr. Ferdinand, what practical steps can clinicians take to improve equity in hypertension care, particularly for patients of color?

Dr. Ferdinand:
Well, I think there's several things to recognize. Number one, the search for health equity is not social science. It's real. Black patients, specifically disadvantaged patients, have higher rates of chronic kidney disease, which leads to end-stage renal disease. The amount of persons who identify as Black who have end-stage renal disease on dialysis are then called disabled by Medicare, and it's three to four times more than the proportion in the population.

Although in many of the clinical trials heart failure is caused by ischemic heart disease after myocardial infarction, in the population, the most common cause of heart failure with reduced ejection fraction and heart failure with preserved ejection fraction is uncontrolled hypertension. We pay for that. In the Medicare population, this is the main cause of admission to the hospital, often recurrent.

In terms of patients who have peripheral arterial disease and need amputations, high blood pressure in combination with diabetes is more common in certain populations, including non-Hispanic, Black, and certain Hispanic populations. We pay for that also because these patients become disabled.

So you have a large number of conditions, which are not just clinical conditions, but they're real social problems that need to be addressed. The individual clinician, therefore, is on the frontline to identify that these disparities are real, and that it's a moral and practical imperative because we waste lives, but we also waste dollars treating end-stage disease that could have been prevented.

Dr. May:
With those practical insights in mind, I want to thank my guest, Dr. Keith Ferdinand, for joining me to share his insights on how we can better address hypertension variation across diverse patient populations. Dr. Ferdinand, it was great having you on the program.

Dr. Ferdinand:
It was my pleasure.

Announcer:
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