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What to Know About the Latest Recommended Guidelines for High Blood Pressure in Adults

### ReachMD

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### Announcer:

Welcome to a new series, Target BP, on ReachMD. The following program was produced in collaboration with the American Heart Association and the American Medical Association following the release of the 2017 Hypertension Guideline. To learn more about the guideline and how your practice can improve blood pressure control rates, visit [targetbp.org](https://targetbp.org).

Dr. Caudle:

Recently, the American College of Cardiology and the American Heart Association Task Force, released new guidelines regarding high blood pressure in adults. Based on a lowered baseline for high blood pressure, nearly half of all Americans are now classified as having high blood pressure. What do these updated guidelines mean for patients? I'm Dr. Jennifer Caudle for ReachMD, and joining me is Dr. Robert Carey, an endocrinologist focused on cardiovascular endocrinology. He was Vice Chair of the Writing Committee and Co-Lead Author of the 2017 guidelines for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. He was also one of the speakers in a live moderated Facebook discussion, convened by the AMA and the AHA, hosted by TEDMED, during the AHA Scientific Sessions in Anaheim. Dr. Carey, welcome to the program.

So, Dr. Carey, help set the groundwork for us with these new hypertension guidelines. What were the priorities for advancing cardiovascular care that are reflected in these guidelines that maybe we didn't see in the last guidelines?

Dr. Carey:

The last guideline, as you know, was JNC 7. That was in 2003, 14 years ago. In the interim between then and now, there've been an enormous number of studies including cohort studies, individual randomized clinical trials, and metaanalyses of trials. The information accumulated over that time has been almost staggering. That was the reason we wanted to update the guideline. And, as you may have heard, the National Heart, Lung, and Blood Institute, which sponsored the JNC series guidelines, transferred the responsibility for new guidelines in all of the major risk factors, including hypertension, to the American Heart Association and the ACC, American College of Cardiology. So, we were following that transfer, appointed in 2014, October to be exact, and we worked very hard for 3 years. We had an independent evidence review committee that was appointed to analyze questions that we had framed for the committee, and we framed 4 such questions that we felt were critical for our guideline. The Evidence Review Committee then reviewed this enormous amount of literature on those 4 topics and came up with answers, and we then were given those data, and we interpreted them a guideline committee, independently. So, that process, in addition to the process of the Guideline Committee actually doing its own review, resulted in a huge amount of data analysis and interpretation. So, to your question then, we found that indeed there was significant change in the data and the interpretation of the data during the 14-year period, in between JNC 7 and present guidelines.

Dr. Caudle:

Your background as an endocrinologist, with particular expertise in cardiovascular endocrinology, really does offer a unique voice in the field. Did this help shape or direct certain elements of the guidelines from your perspective?

Dr. Carey:

Well, from my perspective it did, particularly when it came to causes of hypertension, and to analyses of secondary hypertension, and certain aspects of drug therapy. The perspective of cardiovascular endocrinology was very important.

Dr. Caudle:

And let's talk a little bit about, going to the guidelines, now with the new guidelines; is there such a category as prehypertension, and kind of what's the status on that?

Dr. Carey:

So, we eliminated the term prehypertension, and the reason we did so was that we felt that we needed a better term to reflect the cardiovascular disease risk of people with blood pressures lower than the cutpoint for calling them hypertensive. And so we considered it in great depth, and we decided to substitute the term elevated blood pressure. And then, of course, because we dropped the blood pressure threshold for hypertension from 140/90 to 130/80, we basically created a new stage of hypertension, stage 1, which is between 130/80 and 140/90, which was in the prehypertension category under the old guideline.

Dr. Caudle:

And speaking of the changes that were made, it seems as though the revised definitions for normal blood pressures versus elevated and high blood pressures will move a large segment of the U.S. population over from being at a normal blood pressure to higher risk and possibly needing medications or lifestyle modifications. What impact do you envision this will have on short-to-longterm management of these patients?

Dr. Carey:

I think it's important to emphasize here that the risk didn't change, but our recognition of the risk is what changed. We are recognizing a risk of cardiovascular disease that was previously included in the term prehypertension under the previous guideline. So the effect that will have, when we have this new stage 1 hypertension, 130/80 to 140/90, is to increase the percentage of hypertensives in the United States, and the previous figure was 32% and the current figure under the new guideline is 46%. And actually, if you want me to, I can quote the percentages of people now with various blood pressures under the new guideline. With normal blood pressure, we have about 42% of the population; with elevated blood pressure, and that's 120 to 129 over 80 to 89, we have 12%. And then, for stage 1 hypertension 14%; for stage 2 hypertension 8%, and those that were already on antihypertensive medication are 24%. So, combining all of those, about 46% of the United States adult population can be categorized as hypertensive under the new guideline. Let me follow this, very rapidly though, with some comments about the treatment that is recommended for stage 1 hypertension. So, just to be sure everyone understands, stage 1 used to be prehypertension, now is stage 1 hypertension. That will cause us to treat patients with stage 1 hypertension, and the vast majority of those patients will be recommended lifestyle treatment, and we feel that we need to really intensify lifestyle treatment across the board. And only a very small percent increase from the previous guideline in patients who are recommended drug therapy, and this is only 2% increase from the previous guideline. Just one more point, and it's a critical one, for people that are in stage 1 hypertensive category, we are recommending careful assessment of cardiovascular disease risk, and either the patient does or does not have existing cardiovascular disease. If the patient has cardiovascular disease, they fall into a high-risk category, and if they do not have existing cardiovascular disease, then we recommend a risk calculation provided by the Pooled Cohort Equations of the American Heart Association and American College of Cardiology. And if the cardiovascular disease risk is above 10% for 10 years, then we are going to recommend drug treatment. So drug treatment is recommended for those with existing cardiovascular disease, and with a high-risk, greater than 10%, on the risk calculator.

Dr. Caudle:

If you're just joining us, this is Dr. Jennifer Caudle from ReachMD. I am speaking with Dr. Robert Carey, Vice Chair of the Writing Committee and Co-Lead Author of the 2017 Guidelines for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. Are there changes regarding principles of drug therapy for hypertension?

Dr. Carey:

We have an elaborate discussion of the principles of drug therapy, emphasizing the choice of drug therapy with selection, if the patient needs more than 1 drug, of drugs of different classes, so that the second class that's added would offset the untoward effects of the first drug. In general, we recommend starting patients with stage 2 hypertension with 2 drugs simultaneously, to start them with, and then, for stage 1 hypertension in that high-risk category, it's a judgment call. They could be started either with 1 drug and then a second drug added. Most of them will require 2 drugs, ultimately, to lower their blood pressure. And we're also recommending that the way we give drugs should be to assure maximum adherence. And the best way to do that is with a combination pill, if at all possible, so that 2 drugs of different classes are contained in 1 pill, so that it only needs to be taken once a day. And there's a long section in the guideline

describing the details of that.

Dr. Caudle:

Help us look ahead to the next phases of implementing and following the guidelines. What do you think are the challenges and the opportunities that clinicians will face in trying to adopt this new standard of practice?

Dr. Carey:

Well, I think the first obstacle is accurate blood pressure measurement. And we have an extensive discussion of accurate blood pressure measurement for office blood pressure. It is, in general, not being done well today, and we feel that this can be markedly improved so that we get an accurate measurement by technique. And we also average the measurements, 2 or 3 measurements at a time, and on 2 or 3 different days, all averaged together before a treatment decision is made. The second challenge is to have physicians request out-of-office blood pressure readings. These are very helpful and accurate, both for the diagnosis of hypertension, and for monitoring treatment. This can take the form of ambulatory blood pressure monitoring with a cuff that measures blood pressure several times a day throughout the day, at home and in the work place, and so forth. But also, home blood pressure monitoring in which the patient is taught how to take his or her own blood pressure in an accurate fashion at home, and then transmit those readings, either in writing or digitally, to the physician's office.

The next challenge is going to be implementation of lifestyle changes. We have a slew of lifestyle changes that each have been shown to be extremely effective in lowering blood pressure and the lifestyle recommendations include: weight loss, high-quality diet with high fiber, fruits and vegetables, and low-saturated fats, restriction of sodium intake, increase in dietary potassium intake, exercise, and limitation of alcohol. So we have extensive sessions on how to accomplish this. Another challenge is how we diagnose and improve adherence; diagnose non-adherence and improve adherence to drug therapy. We have a section in the guideline devoted to that. And then, physicians have very limited time to see patients in their offices, and we need to develop routine team-based care that involves nurses, nurse practitioners, dietitians, social workers, community health workers, pharmacists, and other paramedical personnel that can surround the patient and partner with the physician in the care of the hypertensive patient. So, developing these teams is an important part of being able to carry out the best care and monitor the patient outside the office setting. And so, those are examples of a lot of challenges that physicians face in implementing the guideline.

I would like to call your attention to the very extensive online data supplements that are available in the guideline; there are several of these. They are all very important. For example, as Quality Improvement Strategies in Care, Improvement Strategies for Adherence, Strategies to Improve Lifestyle, Responsibilities of the Team in Team-Based Care, and Telehealth and the Use of the Electronic Medical Record. All of these are going to be important. One person, the physician, cannot carry out all of these things, and care will be better if these new support systems are implemented. That's a quick synopsis of the resources that are available in the guideline, which are substantial. They're not in the main body of the document, but they are an online supplementation to the document.

Dr. Caudle:

Well, with that, I want to thank my guest, Dr. Robert Carey. To access this interview and other related content with the AMA, please visit ReachMD.com or download the ReachMD app. I'm Dr. Jennifer Caudle, and as always, inviting you to Be Part of the Knowledge.

Announcer:

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