The recently released American Society of Hypertension (ASH) and International Society of Hypertension Clinical Practice Guidelines for the Management of Hypertension sparked controversy in the kidney care community. Here, George Bakris, MD, FASN, analyzes the new guidelines. Bakris is director of the ASH Comprehensive Hypertension Center in the department of medicine at the University of Chicago School of Medicine.

ASN Kidney News gratefully acknowledges the contributions of Edgar V. Lerma, MD, FASN, to this special feature.

You have been actively involved with previous Joint National Committees (JNCs). Give us some background about the JNC and its evolution.

The JNC started in the early 1970s after a private donor gave a grant to the National Institutes of Health to help produce guidelines in hypertension. The aim was to help practicing physicians better manage patients’ blood pressure (BP). The first guideline was published in 1977, and the last true JNC was the JNC7, published in 2003. When I say “true” JNC I mean that when a guideline document was produced, it was reviewed by many representatives of more than 45 different organizations, including the American Society of Nephrology, the National Kidney Foundation, the American Heart Association (AHA), the American Society of Hypertension (ASH), and many more.

The most recent JNC8, published in 2013, did not have that level of review; in fact, only about 25 or 30 people from the various societies reviewed the document. All the JNCS carefully selected topics of interest to clinicians and reviewed the published literature based on several criteria for the selection of articles. Multicenter outcome trials are preferred, but smaller studies, if relevant and well designed, are also reviewed. Individuals in the writing group have specific areas they cover. The group then meets to discuss the text and recommendations, and over time the JNC is born. JNC8 likewise had a panel that selected topics, but an independent evidence review company of epidemiologists and statisticians did the analyses. Grading was then done on the basis of criteria prespecified by the panel, and guidelines were then written. This process is similar to that for the National Institute for Health and Care Excellence (NICE).

What was the impetus that led the ASH and the International Society of Hypertension (ISH) to decide to publish their own Clinical Practice Guidelines for the Management of Hypertension in the Community?

The effort started out as a document to focus on management of hypertension in communities with low resources (like Haiti, where the initiative originated), and it evolved into the ASH/ISH guideline. I am not aware of the full details about how this happened, but the process was nothing like the JNCs. There was no formal evidence review, and the guidelines represent more of a narrative summary than a systematic review of the available data, interpretation of the data by a small group of authors, and then circulation for input from everyone. So it is more of a consensus report in the spirit of older AHA consensus reports, rather than a guideline document.

What are the most important highlights of the ASH/ISH Clinical Practice Guidelines for the Management of Hypertension in the Community?

The ASH/ISH Clinical Practice Guidelines reinforce many of the concepts already well established by JNC7 and focus more on African Americans than the JNC guidelines do. They are written in a fashion to review concepts and provide perspective. This is in contrast to JNC8, which is purely an evidence-based document that provides little to no narrative about perspective. The ASH/ISH guidelines provide an algorithm much like the JNC8 and are very consistent with data that support this approach.

How are the ASH/ISH Clinical Practice Guidelines different from JNC8 and hypertension guidelines produced by other organizations: NICE, International Society of Hypertension in Blacks, Kidney Disease: Improving Global Outcomes (KDIGO), European Society of Hypertension/European Society of Cardiology (ESH/ESC), Canadian Hypertension Education Program, and American Diabetes Association? What are the most important points of agreement or disagreement between the two sets of guidelines, such as target BP and initial BP? What are the reasons for these disparities?

First of all, a table in the JNC document compares its recommendations with many other recent guidelines from around the world. The JNC and NICE guidelines used a similar approach, as did the KDIGO, to a lesser extent. The ESH/ESC and ADA had a more traditional approach, although the ESH/ESC tried to grade the evidence. You must understand that if you want to “live by the evidence-based sword you must die by the sword.” Thus, when the JNC8 quotes <150/90 mm Hg as a goal in individuals over 60 years of age, it is based on all the prospective clinical trial evidence and inclusion criteria, not on “opinion.” It is one of only two A-level evidentiary statements in the JNC8. Moreover, all goals in the JNC8 are set as “ceilings,” not “floors.” This means that achieving a goal of <150/90 mm Hg is the absolute minimum expected, not the maximum. Clinical judgment is mandatory with all guidelines, such that a vibrant 75-year-old who does well with a BP of 130/70 mm Hg should not be allowed to let it rise to 150/90 mm Hg, which JNC8 states at the end of the document. Conversely, a 75-year-old who is symptomatic when the BP is 140/80 mm Hg should not be kept at this pressure.

The JNC8 and NICE, as well as KDIGO, simply made recommendations based on the purity of the data with much less interpretation than other guidelines. Does that make one right and the other wrong? No. The reader must be wise enough to understand the differences, and if you do not like the more literal guideline interpretations such as NICE and JNC8, then your argument is with the data from trials, not the writers. The good news is that the algorithms of the ASH/ISH and JNC8 are very similar, and they do serve well as an initial approach to BP management. The other good news is that the evidence review statements for JNC8 will be warehoused on the website of the Journal of the American Medical Association. However, there are no data to provide guidance for persons over 80 years of age and for other segments of the population. So these guidelines that are “evidence-based” are only as good as the foundation they are built on (i.e., the evidence).

In your guidelines, one of the headings focused on “Special Issues with Black Patients, African Ancestry.” Tell us about this.

This is the largest ethnic group for whom hypertension is a major problem. This group also represents the largest number of people receiving dialysis today. The International Society of Hypertension in Blacks published an update of their guidelines a couple of years ago. These guidelines were, in part, evidence-based but included a lot of interpretation because of the relative lack of evidence on outcomes in this group. Thus, a focus on this group was considered necessary. You will note the scarcity in JNC8 of guidance for African Americans with diabetes, for example. While there was a paucity of recommendations for hypertension in African Americans in JNC8 there was also a paucity of data from which to derive recommendations.

Do you foresee more guidelines in the future?

Not in the foreseeable future. We have now been inundated with guidelines, and although they overlap in many ways, they are also perceived as contradictory in other ways. This is exemplified by a rebuttal paper published very recently by some of the JNC8 authors in the Annals of Internal Medicine regarding the goal of <150/90.
mm Hg in older adults. Moreover, industry and NIH are unable to fund the large trials we have so far used to provide the evidence for such guidelines. I anticipate that the next guideline update will no longer come from the NIH but from the AHA/American College of Cardiology Foundation and respective collaborative groups like ASH, and that such an update will be at least 5 to 7 years away.

How will the new guidelines affect the way patients with hypertension are diagnosed and treated?

We hope there will be no impact on diagnosis, because nothing in any guideline has recommended a change in the method of diagnosis except for increasing patient empowerment in the use of home BP monitoring. We hope that treatment will be more focused and more aggressive initially, with the algorithms provided by both JNC8 and the ASH/ISH guidance. Physicians and health care professionals should understand that the goals for BP do not prevent caregivers from aiming for a lower BP if they think the patient can tolerate it, especially an elderly patient. I personally will not change my approach based on any of these guidelines because I am already doing what they say, and I do not stop at BPs of 148/88 mm Hg in patients over 60 unless they can’t tolerate the lower pressure.

We always look back to NHANES data for awareness of hypertension and its control and treatment. How do you think these guidelines will affect those numbers?

We hope the current level of BP goal achievement in the United States, i.e., 53% control rates, will not decrease as some fear. The control rates will look better in high-risk groups because the target blood pressure value has been raised. The key issue is what will happen to stroke rates. If health care providers understand that the goals for BP do not prevent caregivers from aiming for a lower BP if they think the patient can tolerate it, especially an elderly patient, stroke rates should not change. But if they allow people who have well-controlled pressure and who are tolerating medications to increase their BP to 150/90 mm Hg, the risk for and rate of stroke will probably increase.

Since the first few JNCs were released, what three or more things do you think practitioners are now doing that were not done before, such as combination therapy, stepped care versus substitution, and stages of hypertension?

First, a clear focus on systolic BP in those over age 50 and diastolic BP in those under age 50 as a goal to reduce the risk of cardiovascular events. Second, using combinations of RAAS blockers with calcium channel blockers or thiazide diuretics as initial single-pill combinations for those whose BP is more than 20/10 mm Hg above their target BP. Third, the JNC8, like all previous and other current guidelines, focuses on lifestyle such as weight reduction and sodium intake more than before, to help with BP reduction. It is the first step in the JNC8 algorithm. Fourth, there is a greater understanding that more BP medications will not achieve BP control unless the patient commits to lifestyle modifications including sodium reduction and weight management.

With these new guidelines, are there any drug classes that you anticipate will be used more often? Less often?

I think there will be much less use of β-blockers as initial therapy unless a compelling cardiac condition exists. Likewise, I think that diuretics will be used less as initial therapy, given that all guidelines, including JNC8, suggest that either RAAS classified blockers, calcium channel blockers, or thiazide diuretics are appropriate first-line meds.

Publication of the VA NEPHRON D trial lent support to the previous findings of the ONTARGET and ALTITUDE trials in abandoning the previous use of combination ACE-I/ARBs. Do you think we’ve heard the last of these?

For the short term, yes. But keep in mind that with the exception of ONTARGET, all these trials were in advanced nephropathy. Moreover, in the VA-NEPHRON D trial there was a slight trend toward an increase in time to dialysis with the combination, albeit a post hoc analysis. With new better tolerated and more predictable potassium binding resins, which we hope will be on the market within the next year or so, something like the VA-NEPHRON could be repeated without the safety confounder of hyperkalemia to stop the trial prematurely and determine whether a difference really exists. But I doubt this will happen because of funding issues.