Commentary

JNC 8: Expectations, Challenges, and Wishes—A Primary Care Perspective

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The Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC) reports have dramatically shaped the treatment of hypertension in this country and beyond. The JNC recommendations have been the cornerstone in the detection, evaluation, and treatment of high blood pressure (BP) in this country since inception. Their periodic revisions have evolved with the publications of well-designed outcome studies. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7), as part of the evolutionary patterns of its predecessors, added prevention to its guidelines. But as we await JNC 8, it may be useful to speculate what changes may be incorporated in the JNC's latest report. This brief commentary provides some expectations, challenges and wishes for JNC 8 from the perspective of a primary care physician. J Clin Hypertens (Greenwich). *2009;11:573–576.*

It is with anticipation that we await the release of the revised guidelines for the Eight Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 8). The 16 members have been appropriately silent in giving specific insights into what changes might lay in store. At this stage, it is appropriate to perhaps offer some musings, expectations, and wishes from the dual perspectives of a primary care physician (internist) and specialist in clinical hypertension.

Our consideration of JNC 8 needs to be framed within the context of what constitutes JNC reports (Table I). They are based on scientific evidence with a goal to simplify the diagnostic evaluation of patients with hypertension. They are not a roadmap for treatment of all hypertensive patients but rather deliberately designed to be effective in the treatment of most individuals while improving the care of all. As consensus documents, not all experts or even members will agree with each aspect of the guidelines, but they are reached by compromise and group decision-making. Finally, from the first report there was a recognition that ongoing studies would result in changes and, as this information became available, the report would be revised, as such be evolutionary.

The first report, issued in 1977, set the tone for subsequent reports.[1] It recognized the need for the improvement of care in the hypertensive population and presented guidelines and standards that serve to advance care even 3 decades later (Table II). Its then rather radical suggestions included the taking of BP at every health care visit regardless of the reason for the visit. This simple recommendation screened and identified both undiagnosed and undertreated hypertensive patients. In this first report (and dating back to Riva-Rocci) there was the recognition that a single BP reading is inadequate for the classification and subsequent treatment of patients. Rather, the average of 2 or 3 readings was required for these purposes. Unfortunately this

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Table I. Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure Reports
Scientifically based
Emphasize simple diagnostic evaluation
Effective for most individuals
Attempts to improve care
Consensus statements
Evolutionary

Table II. First Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC I) Statements
Measure blood pressure (BP) at every office visit
Obtain 2 or 3 readings every visit, using average fifth Korotkoff sound for diastolic reading
Emphasize adherence to drug regimen
Concerns for complexity of using both systolic BP and diastolic BP in guidelines as well as lack of outcome data for systolic BP
Limited extensive workup of hypertension in those with resistant hypertension; simple evaluation for all others
Measuring of BP doesn't constitute practice of medicine

Table III. Eighth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 8) Expectations
Evolutionary nature continues
Reduce blood pressure (BP) more quickly, especially in higher-risk patients
Earlier and more widespread use of combinations, not necessarily fixed-dose or unlikely triple combination
Cardiovascular risk and incorporation into treatment decision will be more global
Out-of-office BP will receive greater discussion
Do not expect β-blockers to be removed from "A list"
Diuretics may lose some primacy but remain essential

recommendation has been ignored far too often, even 3 decades later. The standardization of the fifth Korotkoff sound as the definition for the diastolic BP was an added feature of this first report. The first report standardized the workup of patients for hypertension, reserving the more extensive evaluation for patients with resistant hypertension.

The first report used only diastolic BP for the basis of defining hypertension and treatment goals. Commentary within the report mentioned concerns regarding the complexity of treatment and classification if both systolic and diastolic BP were the basis for this. However, the committee recognized that no outcome data existed for the use of systolic BP for treatment and therefore felt it was premature to include this measure, which we now take for granted. Although it is often overlooked, one of the most impactful and far-reaching recommendations in the first report was the decision that the measuring of BP by nonphysician personnel did not constitute the practice of medicine. This insight opened the door to allow widespread community screening, thereby identifying large numbers of patients at risk.

This seminal report, which had no classification of BP, recognized the relationship between the degree of BP elevation and the urgency of evaluation, treatment, and interval of care and follow-up.

Scientific information resulted in an evolution of both the classification of BP and the therapeutic guidance in subsequent reports.[2–7] Landmarks during the past 30 years include the addition of systolic BP as a target and stepped care. More recently, the simplification of the classification of BP coupled with the addition of a new category of prehypertension as well as a focus on prevention of high BP added new recommendations to the guidelines.

EXPECTATIONS

Given the nature of these reports, we might expect their evolutionary nature to continue. Considering the results of recent studies it is reasonable to think about what we might expect from JNC 8 (Table III). I think we can expect that the guidelines will recommend a greater urgency for the reduction of BP, especially in our higher-risk patients. The importance of getting BP to goal in these higher-risk patients will have emphasis. In order to achieve this goal one may expect greater discussion regarding the early use of combination therapy (whether fixed-dose combination or multiple single prescriptions). Given the lack of published data for triple combinations it is reasonable to expect little discussion of triple combinations. The role of risk in treatment decisions will continue and receive greater emphasis, especially global risk. With the widespread use of home BP kits and the greater recognition of the limits of office measurements it is expected that out-of-office BP measurement will receive greater attention. In addition, the importance of properly performing these measurements on validated devices will also receive some discussion.

I do not expect to see β-blockers be removed from the "A list" for the management of hypertension. The guidelines will not mirror those of our colleagues in Britain for a number of reasons. β-Blockers are not a homogenous class of com-

pounds, unlike the angiotensin-converting enzyme inhibitor class. Their pharmacodynamic effects and characteristics differ enough to make any statement regarding the class scientifically invalid. Given these limitations the results of studies to date are not incontrovertible for demoting the entire class. Comments regarding appropriate dosing would be reasonable to include. Adding to this limited data set, consider the potential confusion for providers and patients alike if irresponsible comments regarding the class were made. Patients with compelling indications, where the class is indicated, might misinterpret the guidelines and decide, without medical advice, that these drugs are dangerous and therefore inappropriate for usage. The story for diuretics will change little, except perhaps for some diminishment in their primacy, despite the results of several recent studies, because diuretic therapy remains a cornerstone for treatment. Many patients are both volume-expanded and undertreated with diuretics, which may be subject to comment in the updated report.

CHALLENGES

Challenges exist for JNC 8 as well (Table IV). The average practitioner has a 15- to 20-minute office visit. Office visits often encompass more than a single problem or issue. Hypertension, either as a return visit or newly diagnosed, is simply part of an office visit that may include other chronic conditions as well as acute problems. Given the propensity for hypertension to coexist with dyslipidemia, obesity, diabetes, and coronary artery disease, among other conditions, it can be readily apparent that this office visit (which must include obtaining history; performing an examination; remeasuring the BP several times; formulating a differential diagnosis, diagnostic, and therapeutic plan; all the while assessing and providing global risk advice) is entirely too short. This fails to include the writing of new prescriptions and obtaining any referrals as well as other issues related to insurance. For many, inappropriately so, the BP may pose the least pressing of the issues addressed during this office visit. Patient and provider may often have different views as to the chief purpose of the visit. Among the challenges of JNC 8 is how to improve the primacy of hypertension control in a routine office visit.

Additional challenges include maintaining the relevance to primary care physicians so they perceive these guidelines as suitable for every patient in every office throughout this land and not just in the ivory towers of scattered medical centers. There is a need to overcome the cynicism of both patients and providers of care who remain not only skeptical of the relevance of these guidelines but expect a certain degree of permanence. Are the guidelines to be a cafeteria where one may freely choose which of them to accept and which to cast aside as not necessary? Many patients are aware of white coat hypertension. Patients often wish to attribute every rise above the norm to this condition. Among the challenges of the guideline committee is to balance these competing influences—the office BP by which most patients were treated in outcome studies to the often-conflicting information that is derived from out-of-office readings. Guidelines have exploded on the scene, with more than 1100 currently available, covering different conditions and representing different groups with varying intervals for updates. Primary care physicians can be overwhelmed by the shear volume of these reports.

Table IV. Eighth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 8) Challenges

Embraced and incorporated into treatment plans by primary care physicians
Balancing blood pressure (BP) goals of office BP and out-of-office BP
Competition with host of other guidelines
Length of office visit coupled with competing issues and problems, increasing the focus of office visit on BP plans
Dissemination of the guidelines

Finally, how will the information be disseminated? It goes without saying that it will be published and the subject of much discussion. How many will actually read the document? How much will be filtered and subject to others' interpretation? Previously, the pharmaceutical industry did much to disseminate the information with a plethora of programs, both continuing medical education and promotional. The environment has appropriately changed. Pharma rules are more restrictive and the economy is less robust. Additionally, with many of the previous therapies now available as generic, there is less interest on the part of pharma to disseminate the changes of JNC 8. The burden will fall to others, such as the American Society of Hypertension, to broadcast these revised guidelines and provide the information as to why hypertension control needs to be at the forefront of every visit.

WISH LIST

As a practitioner, like a child awaiting Christmas, I have a wish list (Table V). This list is composed of wishes that have not been part of previous

Table V. Eighth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 8) Wish List

Guidelines are accompanied by level of evidence rather than simply consensus interpretation
Clinician able to see level of evidence
Reinforces those target goals based on solid outcome data
Adds transparency to recommendations, especially those that result from epidemiologic data
Decreases cynicism
Allows a hierarchy of decision-making
Lay version that targets and informs patient
Ad campaign to increase awareness of blood pressure (BP)
Increase role of patient as partner
Reeducate primary care physicians and patients regarding proper measurement of BP

guidelines but things that I believe add to the value of this report.

The guidelines for JNC 8 should incorporate levels of evidence for each rather than simply being a consensus document. The reasons are multiple. It affords the clinician the ability to account for the levels of evidence in decision-making. It reinforces those target BP goals where outcome data support them while also offering a transparency to the recommendations where the goals may be the result of epidemiologic data rather than double-blind randomized clinical outcome studies. As some practitioners suspect that the JNC reports are as much political as evidential in nature, it may dampen some of their misconceptions. It also may afford a hierarchy of decision-making, placing emphasis on goals and treatments that have the greatest level of evidence and then perhaps pursuing secondary targets where the evidence is less secure.

As the successful treatment of hypertension is the result of the efforts and cooperation of both patient and health care personnel, it is time to incorporate a lay version of JNC. Let it be part of an aggressive advertising campaign to educate patients about the targets of BP, the need to attain control, and the need to properly measure BP in both office and out-of-office settings. Let's get patients partnering in the process where they demand better control and are less resistive to attempts to attain lower BP.

Although every JNC report has included a detailed description of proper technique in the measurement of BP, not enough emphasis is placed on this vital aspect of care. There needs to be a reeducation process of health care personnel as well as the education of our patients as to the proper technique and interpretation of out-of-office BPs, but those readings, obtained properly, should be encouraged and incorporated into the clinical decision-making.

Finally, although JNC reports are deemed to be informative rather than prescriptive or coercive, there is concern that they will not remain so. Attempts to improve BP control rates in this country remain an important aspect of the JNC reports, but how do we do this beyond information? Education of both patient and health care personnel is of paramount importance.

I believe there is an additional benefit from the periodic release of guidelines, whether or not there are substantial changes. They serve to draw focus to hypertension and on the need for constant efforts to tame this disease. They may reeducate and reinvigorate the efforts of all who labor in this field or who suffer from this condition. The heightened awareness will only assist in all our efforts. I join with others and look forward to its release early next year.

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