Editorial

2017 Hypertension guidelines

New opportunities and challenges

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In November 2017, the American Heart Association (AHA) announced changes to the definition and classification of hypertension.[1] The new guidelines developed by the American College of Cardiology (ACC), AHA, and 9 other health professional organizations after review of more than 900 published studies serve as the successor to the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, issued in 2003.[2] The 2017 ACC/AHA guidelines recommend establishing blood pressure (BP) levels on the basis of the average of 2 to 3 readings on at least 2 different occasions, classifying BP into 4 categories (Table),[1] lowering the threshold for disease detection, emphasizing the importance of out-of-office BP measurements to confirm the diagnosis and titration of BP-lowering medication, establishing a BP target of less than 130/80 millimeters of mercury for selected patients, and addressing pharmacotherapy. These changes will affect many people (for example, 46% of the US adult population now will be classified as having hypertension) and the practice of medicine and dentistry in unique ways.[3]

According to this new classification, the number of adults in the United States with hypertension who are not aware, not treated, or do not have their hypertension well controlled is a staggering number—more than 50 million people, or 1 in 4 of all men and 1 in 5 of all women older than 20 years. This number translates to an enormous opportunity for oral health care providers to become involved with screening and monitoring BP, which could benefit patients. Dentists, physicians, and patients are receptive to screening for medical conditions,[4-7] and several sources show that many patients are unaware of their medical health while visiting the dentist.[8,9] Regular BP measurements at dental visits will allow for provider-patient conversations to create awareness, educate the patient, and discuss potential risks (for example, associations with cardiovascular disease [CVD], stroke, heart failure, and chronic kidney disease). These discussions also will allow for the provider to inquire whether patients are performing routine out-of-office BP measurements, following a heart-healthy diet, and obtaining regular exercise, which are measures encouraged by the AHA and shown to improve quality of life.[10]

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Another message emanating from the new guidelines is the 2-fold emphasis on tighter pharmacologic control with initiation of BP-lowering drug therapy for patients at high risk of developing CVD at BP levels of 130/80 mm Hg and for patients with no CVD or who are at low risk of developing CVD at BP levels of 140/90 mm Hg. Providers are encouraged to use the atherosclerotic cardiovascular disease risk calculator[11] to assess the risk of the patient developing heart disease or stroke within 10 years. Here the impact on oral health care providers could be 2-fold: a better understanding of how risk factors affect pharmacologic therapy algorithms and the opportunity to become more familiar with medical risk calculators while at the same time recognizing the advantages, disadvantages, and limitations of these tools as a method for defining risk, aiding in treatment decision making, and helping modify risk behaviors.

The risk of developing CVD already starts at 115/75 mm Hg and doubles for every incremental increase of 20/10 mm Hg,[12] and the systolic BP rather than the diastolic BP is associated with a

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Table. 2017 American College of Cardiology American Heart Association classification.*

BP† CATEGORY	SYSTOLIC BP, MM HG‡		DIASTOLIC BP, MM HG
Normal	< 120	and	< 80
Elevated	120-129	and	< 80
Hypertension			
Stage 1	130-139	or	80-89
Stage 2	≥ 140	or	≥ 90
Hypertensive Crisis	> 180	and/or	> 120

* Source: Whelton and colleagues.[1] † BP: Blood pressure. ‡ mm Hg: Millimeters of mercury.

greater risk of developing CVD.[13,14] Also, although the new 2017 ACC/AHA guidelines[1] result in a considerable increase in the prevalence of hypertension, the increased percentage of people recommended antihypertensive medication is small, yet more people are recommended more intensive interventions to lower BP.[15]

The new guidelines do not change our approach to the question "At what level of BP is treatment unsafe for the patient?" The 2017 ACC/AHA guidelines still state that uncontrolled BP, defined as 180/110 mm Hg or greater, is classified as a minor risk condition with respect to surgical procedures and outcomes[1]; thus, most dentistry is considered safe up to these levels. However, practitioners should be aware that the ACC/AHA 2007 guidelines include a statement that BP should be brought under control before any surgery is performed,[16] and because most dental procedures are elective, the general recommendation remains intact to defer care at BP of 180/110 mm Hg or higher. Also, it is unclear whether more intensive therapeutic interventions may result in a change in the frequency of drug interactions and adverse effects, including hypotensive episodes, during dental care.

Thus, because new guidelines roll out on a regular basis, it behooves the dentist to remember that the health care field is dynamic. We must remain current and knowledgeable and make important contributions to patient health. As an important component of the health care team, we can screen, provide awareness and education, and have conversations with patients regarding health behaviors and health risks associated with medical conditions. The interconnectedness of dentistry with overall health and wellness is an important goal that we can all help achieve. ■

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