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Progress in Prevention

Raising the Bar to Lower Blood Pressure

Key Steps to Improve Blood Pressure Control Rates

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Hypertension (HTN) affects more than 73 million Americans and increases the risk for myocardial infarction, heart failure, stroke, and kidney disease.[1] The relationship between blood pressure (BP) and risk of cardiovascular disease (CVD) events is continuous, consistent, and independent of other risk factors.[2] For individuals aged 40 to 70 years, each increment of 20 mm Hg in systolic BP or 10 mm Hg in diastolic BP doubles the risk of CVD across the entire BP range from 115/75 to 185/115 mm Hg.[3] The effectiveness of lifestyle and pharmacologic treatment in reducing BP has been demonstrated, and substantial evidence indicates that controlling BP in patients who are hypertensive significantly lowers risk of cardiovascular (CV) morbidity and mortality.[2] Moreover, evidence-based HTN management guidelines with treatment goals, established at levels associated with a decrease in CVD complications, have been widely endorsed and disseminated.[2] Target BP is less than 140/90 mm Hg, and a lower target BP (less than 130/80 mm Hg) has been set for those with diabetes or renal disease.[2] However, control rates remain suboptimal.[4] The major gap existing between our ability to effectively treat HTN and actual BP control rates represents a public health imperative.

The prevalence of HTN has increased during the last decade to 29%[4] and is anticipated to increase by an additional 24% by the year 2025.[5] The prevalence of HTN increases dramatically with age and is highest among African Americans.[1,4] Decades of educational efforts by organizations such as the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure[2] and the US National High Blood Pressure Education Program[6] have led to incremental increases in the rates of HTN awareness, treatment, and control.[4] Recent estimates indicate that among individuals who are hypertensive, 76% are aware that they have HTN, 65% are receiving treatment, and control rates are suboptimal, with 37% of all individuals who are hypertensive and 57% of those receiving treatment achieving control.[4]

The prevalence of HTN is particularly high among individuals with comorbid CV conditions.[7] Hypertension prevalence is as low as 23% among those with no comorbid CV conditions and significantly higher among those with comorbid dyslipidemia (52%), diabetes (77%), chronic kidney disease (82%), congestive heart failure (71%), and coronary artery disease (73%).[7] As might be expected, rates of receiving HTN treatment are higher among those with comorbid CV conditions compared to those with no disease.[7] However, among those who are receiving HTN treatment, HTN control rates are significantly lower for those with comorbid dyslipidemia (49%), diabetes (35%), chronic kidney disease (23%), congestive heart failure (49%), and coronary artery disease (50%) than for those with no disease (65%).[7] Uncontrolled HTN further compromises CV risk, requiring intensified efforts to improve treatment and control in this population.[8]

Bridging the gap between therapeutic capability and HTN care delivery will require a multidimensional, multilevel approach that includes engaged patients, healthcare professionals, healthcare systems, and communities.[9,10] Bakris et al[10] recently identified key action steps required by each of these HTN care constituents to substantially improve BP control rates.

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Patients must take the following actions: (1) take an active and responsible role in personal health management, (2) be appropriately educated, (3) develop skills to monitor and control BP, (4) take a partnership role in treatment, and (4) resolve barriers to BP control. The following is required from healthcare professionals: (1) identify, prevent, and correctly treat HTN; (2) promote public and community awareness, (3) develop communication skills that empower patients, and (4) advocate improved access to healthcare. Healthcare systems must be adequately resourced and structured to deliver effective HTN treatment and prevention and promote public and professional education. Communities, including employers, can play an active role in HTN screening and education and promote and support health visits and follow-up care.

A fundamental barrier to BP control that must be addressed is clinician inertia. Clinician inertia occurs when healthcare professionals who are treating HTN fail to increase the intensity of drug treatment although they see the patient regularly and are aware that BP goals have not been achieved.[11,12] The causes of this problem are varied and include lack of knowledge about the relative risks and benefits of rigorous HTN management and resistance to implement guidelines.[11,12] It is not sufficient to merely bring patients close to goal. Treatment guidelines explicitly indicate that most patients will require 2 or more antihypertensive agents to achieve HTN control.[2] The intensity of treatment (ie, dose and/or selection of medication) must be increased until BP is at or below the goal, with the requirement that treatment should also remain well tolerated.[10]

An improvement in the awareness and treatment of HTN in the United States has occurred. Unfortunately, BP control rates remain far below the Healthy People 2010 goal of 50%, especially for patients with HTN and comorbid CV conditions. This is a time to celebrate the progress and renew our commitment to improving BP control rates. Further improvements will require concerted action by patients, healthcare professionals, healthcare systems, and communities. We must raise the bar to lower BP.

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