



## Million Hearts™

# Saving Millions of Lives by Working Together

### OVERVIEW

Heart disease and stroke are the 1<sup>st</sup> and 5<sup>th</sup> leading causes of death in the United States, respectively.<sup>1</sup> Launched in September 2011 and led by the Centers for Disease Control and Prevention (CDC) and the Centers for Medicare & Medicaid Services (CMS), Million Hearts™ has brought together communities, health systems, nonprofit organizations, federal agencies, and private-sector partners to fight these deadly diseases.<sup>2</sup> Million Hearts 2022, the initiative's second 5-year period, launched in 2017, seeks to prevent one million heart attacks and strokes by 2022 by promoting healthy lifestyles, optimizing care, and targeting certain high-need populations for health intervention.<sup>3</sup>

The American Heart Association (AHA) proudly supports the Million Hearts priorities and collaborates with a variety of stakeholders by disseminating evidence-based cardiovascular disease (CVD) prevention strategies and resources that promote better cardiovascular health. Furthermore, as the nation's leading patient-advocacy organization devoted to tackling the burden of cardiovascular disease and stroke, the American Heart Association has continuously adopted more ambitious impact goals to meet this mission. In 2019, AHA adopted the goal of increasing life expectancy across the United States from its current 66 years to at least 68 years by the year 2030.<sup>4</sup> While much progress was made in the past decade towards meeting AHA's previous impact goal—improving the cardiovascular health of all Americans by 20% while reducing deaths from CVD and stroke by 20% by 2020—the burden of high blood pressure and obesity remains a serious concern.<sup>5</sup> National rates of blood pressure control have dropped from 53.8% in 2013-2014 to 43.7% in 2017-2018.<sup>6</sup> Preventing and controlling high blood pressure (HBP), while focusing on health equity in various high-need populations and overall well-being is essential to increasing life expectancy overall.

### THE SILENT KILLER

When a heart beats, it creates pressure to push blood through your blood vessels and capillaries. The pressure – blood pressure – is the result of two forces. The first occurs as heart pumps blood out into the arteries (systolic). The second force is created as the heart rests between beats (diastolic). These two forces are represented by the two numbers in a blood pressure reading. When these forces are too strong (as indicated by a reading 130/80 mm Hg or above) they stretch the walls of the arteries beyond a healthy limit.<sup>7</sup>

HBP, with the exception of extreme cases, has no symptoms. Unfortunately, if left untreated HBP can cause severe damage to major organs, including the heart, lungs, kidneys, and eyes. Having HBP can cause arterial damage, atherosclerosis, heart failure, angina, and can lead to heart attack and stroke.<sup>8</sup> In 2018, HBP was linked to nearly 500,000 deaths in the U.S. and is one of the largest risk factors attributing to cardiovascular death.<sup>9,10</sup>

Estimates suggest medical costs associated with HBP are \$131 billion higher per year, roughly \$1,920 higher per person annually, than in scenarios where HBP is eliminated.<sup>11</sup> By 2035, AHA estimates that total costs (both lost productivity and direct medical costs) associated with all forms of CVD will rise to \$1.1 trillion annually.<sup>12</sup>

### WHO HAS HIGH BLOOD PRESSURE?

According to the CDC, nearly half of all adults in the U.S. (108 million), have HBP.<sup>11</sup> Numerous risk factors and markers for development of hypertension have been identified, including age, geography, ethnicity, family history of HBP, lower education and socioeconomic status, greater weight, lower physical activity, tobacco use, psychosocial stressors, sleep apnea, and dietary factors such as dietary fats, higher sodium intake, lower potassium intake, and excessive alcohol intake.<sup>7</sup>

While not all risk factors for HBP can be modified, many risk factors associated with HBP are controllable. It is estimated that 87 million adults have been recommended certain lifestyle changes and prescription medication to control their HBP yet an estimated 71% (61 million) of these individuals have not been able to get their HBP under control.<sup>13</sup> There are several ways to control HBP, including following a healthy diet and reducing sodium intake, participating in regular physical activity, maintaining a healthy weight, taking prescribed medications, and limiting alcohol intake.

## **Health Disparities**

Current structural barriers to controlling hypertension include individuals lacking or being unable to afford adequate health insurance, which impacts access to health services.<sup>14,15,16</sup> Other factors, including limited health literacy, combined with unsupportive environments that do not allow those with hypertension effectively control their condition or exacerbate it are also of concern.

Of the risk factors for hypertension, race and ethnicity, have exposed significant and concerning disparities that AHA seeks to address. African American and Hispanic adults suffer from HBP at higher rates, with Black individuals dying from CVD at nearly twice the rate as whites.<sup>4</sup> Discrimination and other social determinants contribute to these disparities as well. For example, having multiple jobs, working early or late, or living in a community with poor air quality, or with high crime may raise the risk of developing HBP.<sup>17,18</sup> This translates to increased risks of early mortality. For example, life expectancy for low-income males is over 14 years lower than for men in the highest income bracket.<sup>15</sup> Efforts to reduce the burden of HBP in these communities requires a comprehensive effort to improve not just health but overall well-being as well. As a result of the seriousness of HBP in the U.S., especially now with the raging COVID-19 pandemic exacerbating health disparities caused by social determinants of health, the U.S. Surgeon General's *Call to Action* to Control Hypertension is warranted.

## **HYPERTENSION AND SODIUM**

Excessive dietary sodium consumption has long been associated with linked to HBP. Likewise, evidence supports improved health through reduced sodium consumption.<sup>19</sup> However, the average American continues to consume about 3,400 mg of sodium per day,<sup>20</sup> significantly more than the American Heart Association's maximum recommended levels of 2,300 mg/day and even further beyond the ideal limit of 1,500 mg/day for those with HBP.<sup>21</sup> Most of the top contributors to this dangerous level of sodium intake come from food obtained at stores and restaurants, in particular breads, which accounted for 6% of total sodium consumed.<sup>20</sup>

According to the CDC, a 40% reduction in sodium consumption and consequent decreases in hypertension among U.S. adults could save at least a quarter million lives over 10 years.<sup>20</sup> Experts have promoted the Dietary Approaches to Stop Hypertension (DASH) eating plan, which supports each whole grains, limited saturated and trans fats, reducing excess sodium and sugar intake, and consuming a variety of healthy protein sources.<sup>13</sup>

## **MILLION HEARTS™**

In Million Hearts™ first 5-year cycle, the initiative, through substantial partner engagement and intervention support is estimated to have prevented 135,000 heart attacks, strokes, and other CVD-related events as well as \$5.6 billion in direct medical expenditures from saved deaths, hospitalizations, and ER visits.<sup>22</sup>

The initiative's second cycle goal to prevent one million heart attacks and strokes by 2022 includes several activities aimed at helping Americans better control their blood pressure. The initiative aims to:

- Reduce sodium intake by 20%
- Reduce tobacco use by 20%
- Reduce physical inactivity by 20%
- Achieve 80% of the ABCS Clinical Quality Measures<sup>1</sup>
- Reach 70% participation in cardiac rehab among eligible patients

Some of the Million Hearts™ activities to support healthy lifestyles include working with partners to provide healthier food procurement and nutrition policies, conducting mass media campaigns on the dangers of tobacco use, and designing environments and communities that promote physical activity.<sup>3</sup>

Efforts to optimize care, such as improving ABCS measures and cardiac rehab participation, will require the full-cooperation of care teams, innovative technology, and patient and family supports. Specifically, pharmacists, community health workers, and others will need to utilize various decision support programs, electronic health records, and outreach tools, while training family and friends on proper nutrition, tobacco use, environmental risks, as well as the importance of at-home blood pressure monitoring to truly have an impact on reducing incidence of CVD.<sup>3</sup>

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<sup>1</sup> ABCS Clinical Quality Measures are: Aspirin when appropriate, Blood pressure control, Cholesterol management, and Smoking cessation

Lastly, Million Hearts 2022 will focus on improving outcomes for high-risk populations. These populations include Black individuals with hypertension, 35–64 year olds, individuals with prior CVD events, and those with substance use/mental illness. Specific interventions for these cohorts include medication adherence programs, referrals to social services, and tobacco-free mental health and substance use programs, among others.

## **ACTION PLAN TO IMPROVE CARDIOVASCULAR HEALTH**

The American Heart Association is committed to programs and public policies that will reduce the prevalence of HBP and burden of CVD. As part of its participation in Million Hearts™ and toward attainment of the 2030 Impact Goals AHA is:

- Providing access to health management tools, such as My Life Check and Heart360.
- Engaging all AHA staff and leadership in equity training and engaging partners and communities in adopting a social-determinants of health framework
- Influencing policy and practice through the Well-Being in the Nation organization to reduce health inequities
- Promoting further scientific research to better understand effective interventions, partnerships, and advocacy for promoting equitable health and well-being
- Working with approximately 118 recognized Hypertension Control Champion organizations and individuals, serving 15 million adults across 37 states as part of the Hypertension Control Challenge and the Target:BP initiative
- Improving access to home blood pressure monitors and support primary care teams to implement self-measured blood pressure with clinical support
- Working with federal agencies to harmonize clinical indicators to measure the progress toward attaining the ABCS.
- Working with national organizations and quality improvement organizations to share evidence-based protocols and best practices, measure and improve clinical performance, and address healthcare disparities.
- Developing webinars and disseminating collaborative and coordinated monthly messaging campaigns.
- Working with leaders and experts to collaborate and learn more about best practices of successful hypertension control efforts.
- Mobilizing diverse organizations to create a culture that drives high impact solutions for greater blood pressure control through our Check.Change.Control.program

## **THE ASSOCIATION ADVOCATES**

The American Heart Association also advocates for changes in health policy and programs that help patients better prevent and control HBP. These efforts include:

- Supporting funding for Million Hearts™ to help Americans prevent and control HBP.
- Protecting funding for the Prevention and Public Health Fund (PPHF), which provides support for Million Heart's activities.
- Promoting patient HBP medication adherence<sup>23</sup> through public policies and programs.
- Supporting implementation of the recommendations in the Institute of Medicine's report *Strategies to Reduce Sodium Intake in the United States*.<sup>24</sup>
- Support for population approaches to improve diet, physical activity, and smoking habits to reduce burden of HBP and CVD.
- Support equitable promotion and coverage of self-measured blood pressure monitoring (SMBP).
- Promote development of communities with Complete Streets, Safe Routes to School, and other evidence-based strategies that improve active transportation for all Americans.
- Support affordable housing and policies that ensure neighborhoods are environmentally, physically, and emotionally safe and socially supportive.

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<sup>1</sup> Leading Causes of Death. National Center for Health Statistics. Centers for Disease Control and Prevention. October 30, 2020. <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>

<sup>2</sup> About Million Hearts. U.S. Department of Health and Human Services. October 5, 2020. <https://millionhearts.hhs.gov/about-million-hearts/index.html>

<sup>3</sup> Million Hearts 2022 Design. U.S. Department of Health and Human Services. <https://millionhearts.hhs.gov/files/MH-Framework.pdf>

<sup>4</sup> Angell SY, et al. The American Heart Association 2030 Impact Goal: A Presidential Advisory From the American Heart Association. *Circulation*. March 3, 2020; 141(9): e120–e138. <https://doi.org/10.1161/CIR.0000000000000758>

<sup>5</sup> Benjamin, EJ, Muntner, P, Alonso, A, Bittencourt, MS, Callaway, CW, Carson, AP, Chamberlain, AM, Chang, AR, Cheng, S, Das, SR, et al; on behalf of the American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2019 update: a report from the American Heart Association. *Circulation*. 2019;139:e56–e528. doi: 10.1161/CIR.0000000000000659

- <sup>6</sup> Berg S. Surgeon General: Hypertension control must be a national priority. American Medical Association. October 8, 2020. <https://www.ama-assn.org/delivering-care/hypertension/surgeon-general-hypertension-control-must-be-national-priority>
- <sup>7</sup> High Blood Pressure. Centers for Disease Control and Prevention. May 19, 2020. <https://www.cdc.gov/bloodpressure/about.htm>
- <sup>8</sup> Health Threats From HBP. American Heart Association. October 31, 2016. <https://www.heart.org/en/health-topics/high-blood-pressure/health-threats-from-high-blood-pressure>
- <sup>9</sup> Facts About Hypertension in the United States. Centers for Disease Control and Prevention. September 8, 2020. <https://www.cdc.gov/bloodpressure/facts.htm>
- <sup>10</sup> Benjamin EJ, et al. Heart Disease and Stroke Statistics – 2018 Update: A Report From the American Heart Association. *Circulation*. March 20, 2018; 137(12). <https://www.ahajournals.org/doi/epub/10.1161/CIR.0000000000000558>
- <sup>11</sup> Kirkland EB, et al. Trends in Healthcare Expenditures Among US Adults With Hypertension: National Estimates, 2003-2014. *J Am Heart Assoc*. 2018;7:e009731. DOI: 10.1161/JAHA.118.008731
- <sup>12</sup> Cardiovascular Disease: A Costly Burden For America - Projections Through 2035. AHA CVD Burden Report. 2017. <https://healthmetrics.heart.org/wp-content/uploads/2017/10/Cardiovascular-Disease-A-Costly-Burden.pdf>
- <sup>13</sup> The Surgeon General’s Call to Action to Control Hypertension. U.S. Department of Health and Human Services, Office of the Surgeon General. 2020. <https://millionhearts.hhs.gov/files/SG-CTA-on-Hypertension-508.pdf>
- <sup>14</sup> The Community Guide. Cardiovascular disease: reducing out-of-pocket costs for cardiovascular disease preventive services for patients with high blood pressure and high cholesterol website. 2012; <https://www.thecommunityguide.org/findings/cardiovascular-disease-reducing-out-pocket-costs-cardiovascular-diseasepreventive-services>.
- <sup>15</sup> Egan BM, Li J, Small J, Nietert PJ, Sinopoli A. The growing gap in hypertension control between insured and uninsured adults: National Health and Nutrition Examination Survey 1988 to 2010. *Hypertension*. 2014;64(5):997–1004.
- <sup>16</sup> Fang J, Zhao G, Wang G, Ayala C, Loustalot F. Insurance status among adults with hypertension-the impact of underinsurance. *J Am Heart Assoc*. 2016;5(12).
- <sup>17</sup> High Blood Pressure. National Heart, Lung, and Blood Institute. May 8, 2020. <https://www.nhlbi.nih.gov/health-topics/high-blood-pressure>
- <sup>18</sup> Tung EL, et al. Association of Rising Violent Crime With Blood Pressure and Cardiovascular Risk: Longitudinal Evidence From Chicago, 2014-2016. *Am J of Hypertension*. December 2019; 32(12), 1192-1198. <https://doi.org/10.1093/ajh/hpz134>
- <sup>19</sup> Grillo A, Salvi L, Coruzzi P, Salvi P, Parati G. Sodium Intake and Hypertension. *Nutrients*. 2019;11(9):1970. Published 2019 Aug 21. doi:10.3390/nu11091970
- <sup>20</sup> Quader ZS, Zhao L, Gillespie C, et al. Sodium Intake Among Persons Aged  $\geq 2$  Years — United States, 2013–2014. *MMWR Morb Mortal Wkly Rep* 2017;66:324–238. DOI: <http://dx.doi.org/10.15585/mmwr.mm6612a3External>
- <sup>21</sup> Shaking the Salt Habit to Lower High Blood Pressure. American Heart Association. October 31, 2016. <https://www.heart.org/en/health-topics/high-blood-pressure/changes-you-can-make-to-manage-high-blood-pressure/shaking-the-salt-habit-to-lower-high-blood-pressure#:~:text=The%20American%20Heart%20Association%20recommends,blood%20pressure%20and%20heart%20health.>
- <sup>22</sup> Million Hearts Continues to Make Significant National Impact. U.S. Department of Health and Human Services. September 2020. [https://millionhearts.hhs.gov/files/Million\\_Hearts\\_Program\\_Impact.pdf](https://millionhearts.hhs.gov/files/Million_Hearts_Program_Impact.pdf)
- <sup>23</sup> A Tough Pill to Swallow. American Heart Association. 2014. [http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm\\_460769.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_460769.pdf).
- <sup>24</sup> Strategies to Reduce Sodium Intake in the United States. Institute of Medicine. 2010.