Health and Economic Benefits of High Blood Pressure Interventions

- Half of U.S. adults have high blood pressure, or hypertension, a preventable and treatable risk factor for heart disease and stroke.
- · High blood pressure is one of our nation's costliest health conditions
- CDC supports the use of evidence-based interventions, including self-measured blood pressure monitoring, team-based care, community health workers, and pharmacy-based interventions to help people manage their blood pressure.



High blood pressure, defined as having a blood pressure reading of 130/80 mm Hg or higher, is a dangerous condition and key risk factor for heart disease and stroke. Healthy lifestyle behaviors—like eating a diet high in fruits and vegetables and low in sodium and being physically active—can help prevent high blood pressure.

- Nearly half of U.S. adults (119.9 million) have high blood pressure, and most of them (94.9 million) are recommended lifestyle modifications and prescription medication.
- 3 in 4 adults with high blood pressure (92 million) do not have it under control, defined as less than 130/80 mm Hg.1
- High blood pressure rates vary by race and ethnicity. Over half (58%) of non-Hispanic Black adults, 49% of non-Hispanic White adults, 45% of non-Hispanic Asian adults, and 39% of Hispanic adults in the United States have high blood pressure.
- About 83% of non-Hispanic Black adults, 75% of non-Hispanic White adults, 82% of non-Hispanic Asian adults, and 83% of Hispanic adults with high blood pressure do not have it under control.
- In 2022, high blood pressure was a primary or contributing cause of 685,875 deaths in the United States.3

Annual costs associated with high blood pressure were an estimated \$219 billion in the United States in 2019. 4 Because high blood pressure affects so many Americans, it is one of our nation's costliest health conditions.

- Annual medical costs for people with high blood pressure were \$2,759 higher than for people without high blood pressure in 2019.4 In a large convenience sample of privately insured adults who sought outpatient care, annual medical costs were \$2,926 higher for those with high blood pressure than those without in 2021.5
- As a preventable and treatable risk factor for cardiovascular disease, high blood pressure it is a large contributor to increased health care costs.
 - About 1 in every 8 health care dollars is spent on cardiovascular disease (about 12% in 2019–2020).6
 - Cardiovascular disease drives substantial Medicare costs. In 2018, national per-capita Medicare costs for all fee-for-service beneficiaries living with heart disease or surviving a stroke were \$19,693 and \$31,882, respectively.

CDC supports state, local, tribal, and territorial heart disease and stroke prevention programs that help millions of Americans control their high blood pressure and reduce other risk factors for heart disease and stroke. The agency promotes strategies and policies that encourage healthy lifestyles and behaviors, healthy environments and communities, and access to early and affordable detection and treatment of high blood pressure. These evidence-based strategies help save lives and reduce health care costs. The strategies include:

- Expanding the use of team-based care, which means health care professionals work with pharmacists, community health workers, and other health professionals to manage patients' high blood pressure.89
- Expanding the use of community health workers to connect people with the services and lifestyle programs they need to reduce their blood pressure.
- Increasing the use of self-measured blood pressure monitoring, where people with high blood pressure check their own blood pressure regularly and share this information with their health care provider. 1112

Improvements in high blood pressure control could save lives and billions in health care costs every year. For example:

- Using team-based care that includes a pharmacist could prevent up to 91,900 heart attacks, 139,000 strokes, and 115,400 cardiovascular deaths over 5 years among U.S. adults with uncontrolled high blood pressure. Medicare could save up to \$900 million over 5 years with this intervention.
- Adopting self-measured blood pressure monitoring programs could reduce heart attacks by 4.9% and strokes by 3.8%, and could generate \$7,794 average savings in health care costs per person over 20 years. 13
- Compared to standard treatment, self-measured blood pressure monitoring would yield a return on investment of \$7.50 to \$19.34 per \$1 spent over 10 years. 12

For more information about strategies to prevent heart disease and stroke, see <u>Best Practices for Cardiovascular Disease Prevention Programs</u> and <u>Hypertension Control Change Package for Clinicians</u>.

Many effective strategies to manage high blood pressure are a good value in terms of cost per quality-adjusted life year (QALY) gained.* For example:

- Team-based care to improve blood pressure control has a median cost of \$16,309 (in 2023 dollar value) per QALY gained.1415
- The use of community health workers, as part of a team, has a median estimated cost of \$20,642 (in 2023 dollar value) per QALY gained. 915
- When used with other approaches, self-measured blood pressure monitoring has a median cost of \$3,305 to \$12,749 (in 2023 dollar value) per QALY gained. 1015
- * Public health interventions that cost less than \$50,000 per QALY are widely considered cost-effective.

December 9, 2024

Facebook LinkedIn Twitter Syndicate

National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)

References

- 1. Centers for Disease Control and Prevention. Estimated hypertension prevalence, treatment and control among US adults. Reviewed May 2023. Accessed May 3, 2024. https://millionhearts.hhs.gov/data-reports/hypertension-prevalence.html
- 2. Million Hearts. Estimated hypertension prevalence, treatment, and control among US adults: tables. Centers for Disease Control and Prevention. Accessed November 20, 2023. https://millionhearts.hhs.gov/files/Estimated-Hypertension-Prevalence-tables-508.pdf
- 3. National Center for Health Statistics. Multiple Cause of Death 2018–2022 on CDC WONDER Database. Accessed May 3, 2024. https://wonder.cdc.gov/mcd.html
- 4. Wang Y, Lee JS, Pollack LM, Kumar A, Honeycutt S, Luo F. Health care expenditures and use associated with hypertension among U.S. adults. *Am J Prev Med*. 2024;67(6):820–831.
- 5. Kumar A, He S, Pollack LM, et al. Hypertension-associated expenditures among privately insured US adults in 2021. *Hypertension*. 2024;81(11):2318-2328. doi: 10.1161/HYPERTENSIONAHA.124.23401
- Martin SS, Aday AW, Almarzooq ZI, et al.; American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics
 Subcommittee. 2024 Heart Disease and Stroke Statistics: A Report of US and Global Data From the American Heart Association. Circulation. 2024 20;149(8):e347-e913.
 doi: 10.1161/CIR.000000000001209.
- Centers for Medicare & Medicaid Services. Mapping Medicare Disparities by Population. Accessed July 19, 2024. https://data.cms.gov/tools/mapping-medicare-disparities-by-population
- 8. Community Preventive Services Task Force. Cardiovascular disease prevention and control: team-based care to improve blood pressure control. Accessed November 15, 2023. https://www.thecommunityguide.org/findings/heart-disease-stroke-prevention-team-based-care-improve-blood-pressure-control.html
- 9. Overwyk KJ, Dehmer SP, Roy K, et al. Modeling the health and budgetary impacts of a team-based hypertension care intervention that includes pharmacists. *Med Care*. 2019;57(11):882–889.
- Community Preventive Services Task Force. Cardiovascular disease prevention and control: interventions engaging community health workers. Accessed December 16, 2019. https://www.thecommunityguide.org/news/engaging-community-health-workers-recommended-prevent-cardiovascular-disease.html
- 11. Community Preventive Services Task Force. Cardiovascular disease prevention and control: self-measured blood pressure monitoring interventions for improved blood pressure control—when combined with additional support. Accessed December 16, 2019. https://www.thecommunityguide.org/findings/heart-disease-stroke-prevention-self-measured-blood-pressure-with-additional-support.html
- 12. Arrieta A, Woods J, Qiao N, Jay S. Cost-benefit analysis of home blood pressure monitoring in hypertension diagnosis and treatment: an insurer perspective. *Hypertension*. 2014;64:891–896.
- 13. Li Y, Zhang D, Li W, et al. The health and economic impact of expanding home blood pressure monitoring. Am J Prev Med. 2023;65(5):775–782.
- 14. Ritchey M, Tsipas S, Loustalot F, Wozniak G. Use of pharmacy sales data to assess changes in prescription- and payment-related factors that promote adherence to medications commonly used to treat hypertension, 2009 and 2014. *PLoS One*. 2016;11(7):e0159366.
- 15. U.S. Bureau of Economic Analysis. Table 2.5.4. Price Indexes for Personal Consumption Expenditures by Function. Accessed October 23, 2024.
- Divisions and Offices
- About Us
- Chronic Disease Interventions
- Budget and Funding
- Our Impact
- Social Media Resources

Sign up for Email Updates