

Comprehensive Benefit Design for Hypertension

June 26, 2023

Note: This project was supported by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services. The contents are those of the authors and do not necessarily represent the official views of, nor an endorsement by, CDC/HHS or the U.S. government.

EMPLOYERS' TOP CONDITIONS

- Obesity
- Diabetes
- Cancer/oncology care
- Musculoskeletal conditions
- Mental health
- Maternity care, especially pre-term infants
- Cardiovascular care

→ Question: Where is hypertension on this list?

ANSWER: HYPERTENSION IS EVERYWHERE – AS A POTENTIAL CAUSAL FACTOR, AND/OR DRIVER OF POOR OUTCOMES AND HIGHER COSTS!!!

Hypertension and type 2 diabetes are common comorbidities. Hypertension is twice as frequent in patients with diabetes compared with those who do not have diabetes. Moreover, patients with hypertension often exhibit insulin resistance and are at greater risk of diabetes developing than are normotensive individuals. The major cause of morbidity and mortality in diabetes is cardiovascular disease, which is exacerbated by hypertension.

The relationship between excess adiposity and increased blood pressure is well established, and it is estimated that obesity accounts for 65–78% of cases of primary hypertension.

Generalized osteoarthritis was found to be significantly more common in older males with high than with low diastolic blood pressure. The excess of osteoarthritis in those with hypertension was mainly in the hips, knees, carpometacarpal and metacarpophalangeal joints, and was independent of obesity

Hypertension has been associated with an increased likelihood of developing certain cancers and with higher cancer-related mortality. Moreover, various anticancer therapies have been reported to cause new elevated blood pressure or worsening of previously well-controlled hypertension.



●● Hypertension and Employee Health and Well-being

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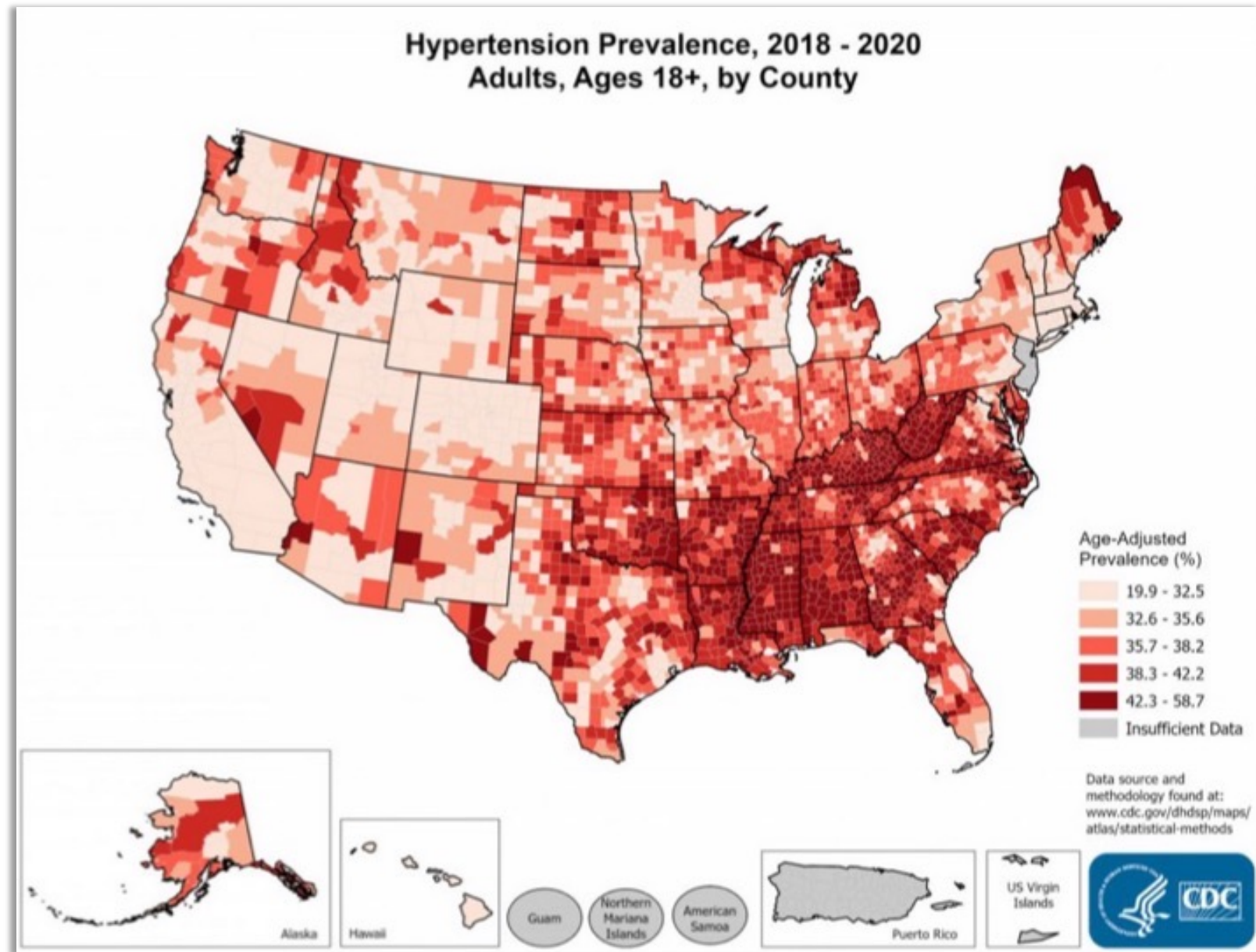


Population Epidemiology

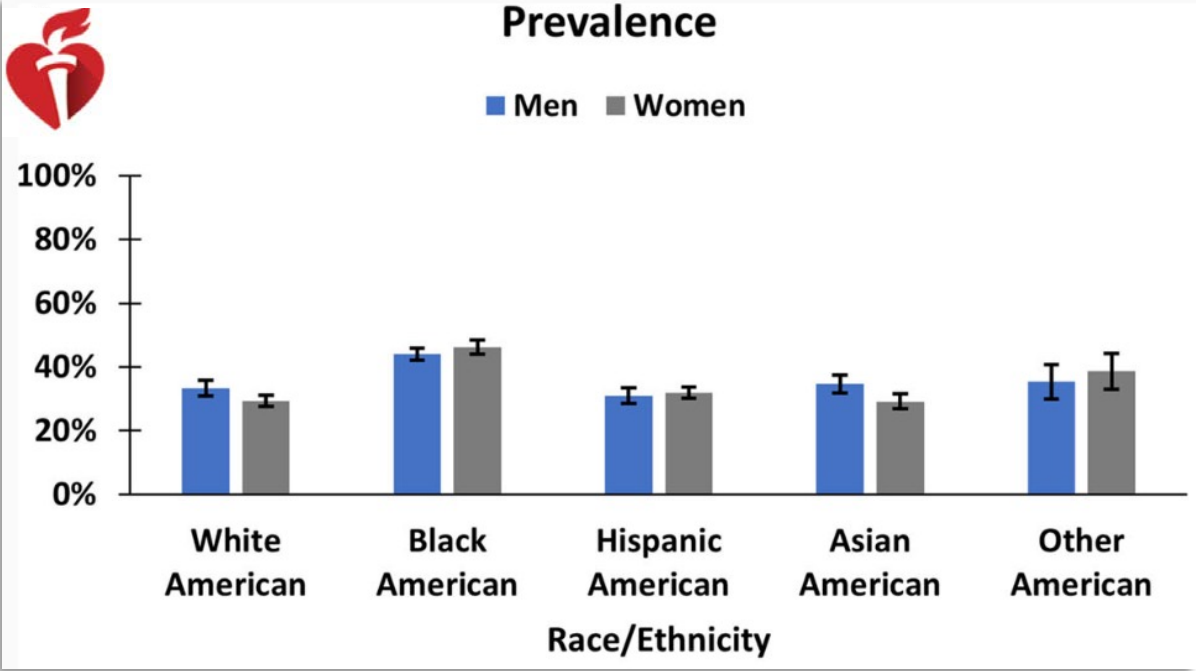
Learning from public health surveillance

Who is affected by hypertension?

Hypertension, also called high blood pressure, affects **almost half the U.S. adult population** and presents significant potential health risks.



Hypertension inequities



African American adults are more likely than white adults to **develop high blood pressure earlier** in life.

Find tips for control at [cdc.gov/bloodpressure](https://www.cdc.gov/bloodpressure).



Quick Hypertension Facts

1. Hypertension affects nearly half of US adults (48%), more than the proportion of adults with obesity (42%) or diabetes (11%).
2. Hypertension usually has no warning signs or symptoms, and many people do not know they have it.
3. Hypertension rates are disproportionately higher among non-Hispanic Black adults vs. non-Hispanic White adults and may develop at younger ages.
4. Uncontrolled hypertension puts millions of people at risk for largely preventable events and conditions, such as heart attacks, strokes, kidney disease, heart failure, dementia, and severe pregnancy complications, which raise a woman's lifetime risk of heart disease.
5. **We know what works! It's time to ensure that best and promising practices, including those that address the inequities that result in disparities, are adopted, expanded, and spread across the country.**





Employer-Level Epidemiology

Learning from research

How are *employees* affected by hypertension?

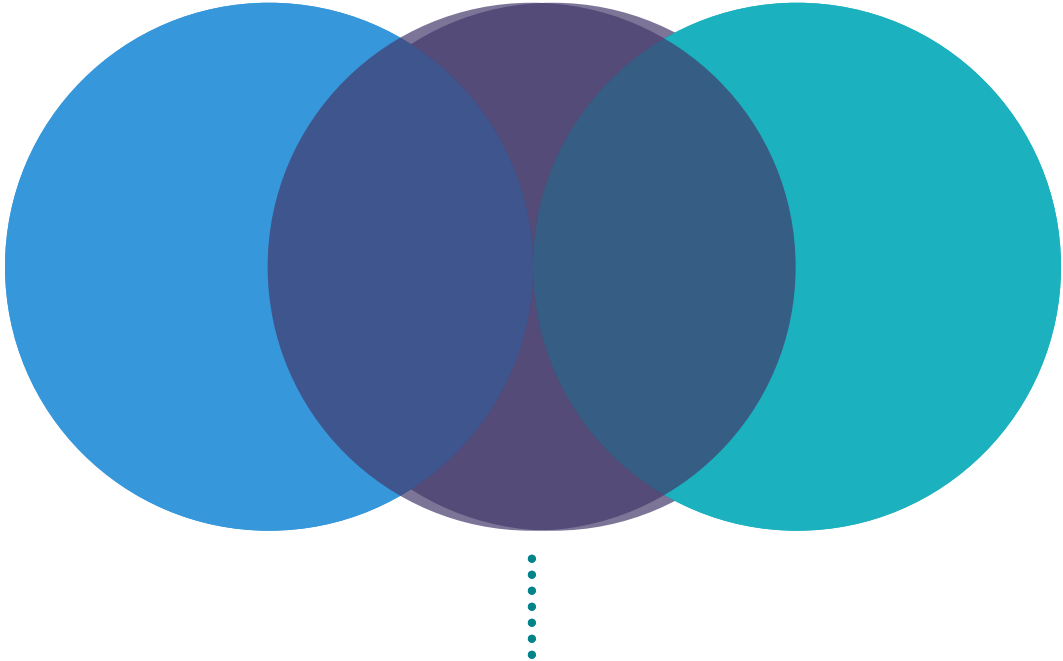
1. Approximately half of those with hypertension **have at least one** comorbidity such as high cholesterol, diabetes or coronary heart disease.
2. Nearly 4 in 10 people with hypertension have **three or more** comorbidities.
3. Approximately 41% of individuals diagnosed with **diabetes** are also diagnosed with hypertension. Those with diabetes aged 40-59 are 38% more at risk to be diagnosed with hypertension.
4. 2 in 10 individuals with hypertension have **evidence of coronary heart disease or stroke.**



How are *employers* affected by hypertension?

Lack of awareness & control

Only 70% of employees are aware of their hypertension diagnosis and only 65% of those have hypertension under control.



All industries affected

Prevalence ranges from 29% of sales and office workers to nearly 40% of installation and transportation workers.

Hypertension affects 30% of employees, whereas diabetes affects 20% and depression 10%.

Most prevalent condition

Hypertension Direct Costs



Based on Medical Expenditure Panel Survey (MEPS) data, outpatient payments related to hypertension per patient per year were **22.7%** higher in 2012-2013 than in 2000-2001 (\$416 vs. \$322, 2015 USD).



The annual cost of hospitalization for patients with hypertension was approximately **\$40 billion** in 1979-1982 and increased to **\$113 billion** in 2003-2006 (adjusted to 2008 USD).



Mean annual medical expenditures for those with hypertension were **\$1,920 more per person (2016 USD)** than individuals without hypertension.



Employees with hypertension had higher combined employer and employee healthcare expenditures, including healthcare costs, deductibles, copayments, and coinsurance, compared to employees without hypertension (**\$5,734 vs. \$4,356** annually).

Factors that increase direct costs

Age

Individuals with hypertension aged 45-64 had **12% higher** annual medical expenditures than those aged 18-44 and **8% lower** expenditures than those aged over 65.²

Comorbidities

Annual medical expenditure for individuals with hypertension increase with the number of comorbidities – **\$3,914** for those with no comorbidities vs. **\$13,920** for those with 3 or more comorbidities.¹

Pregnancy

Pregnant women with chronic hypertension and gestational hypertension had **\$6,041** and **\$2,237** (2014 USD) higher mean medical costs than pregnant women without hypertension disorder.³

Hypertension Indirect Costs

Absenteeism Costs

- A large employer with over 1,000 employees was estimated to have **\$58,450** in annual costs from absenteeism due to hypertension from 2008 to 2011.
- Annual workdays lost by hypertension per employee was **12.13 days** during 2011-2013, which was **1.82 times** as long as those by arthritis/rheumatism (**6.65 days**) and was **1.23 times** as long as those by lung disease (**6.65 days**).

Presenteeism Costs

- A study conducted with a large health system across six locations estimated the annual cost of presenteeism due to hypertension was **\$126** per employee from 2011 to 2015.
- The annual estimated cost of presenteeism due to hypertension for the employer was **5.3 times** as much as the cost due to heart disease for an employer from 2011 to 2015.



CDC Foundation Initiatives

Our focus on hypertension

BP First

6-month pilot blood pressure (BP) control and management program

Objective: to improve the health status of participants through a pharmacist-delivered blood pressure control program

- Medication Therapy Management
- Coaching

Employer benefits:

- 1) Built upon existing secondary prevention initiatives (e.g., screening)
- 2) Supported chronic condition(s) management
- 3) Facilitated access to pharmacists
- 4) Optimized medication use for better control of blood pressure

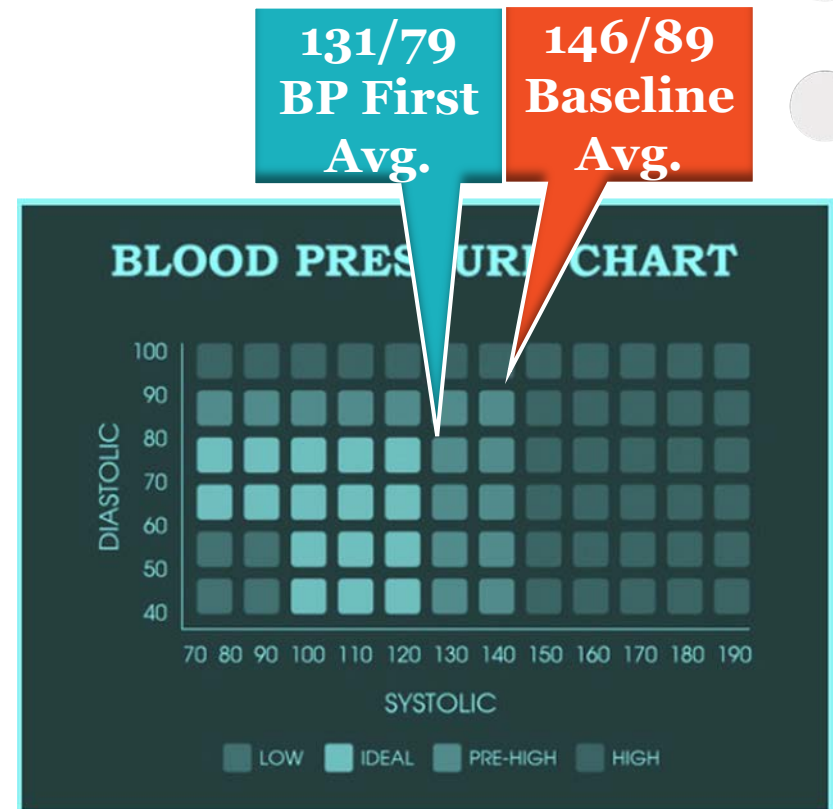


Blood Pressure

Net average reduction of 15 mm Hg (systolic) and 10 mm Hg (diastolic) in 6 months

In a systematic review of worksite wellness initiatives*, participating employees reduced systolic bp by 2.6 mm Hg and diastolic bp by 1.8 mm Hg

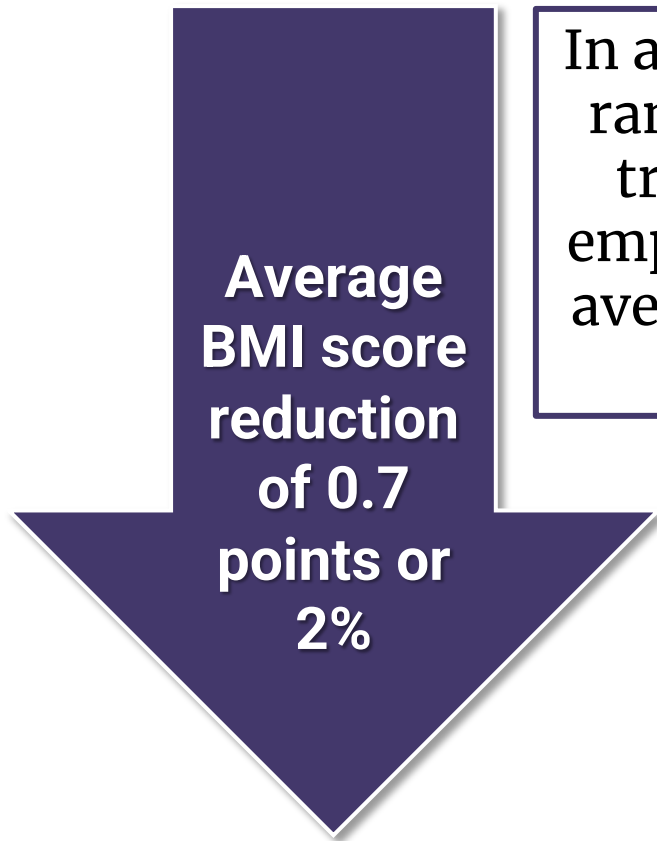
Average BP reduced by 11%



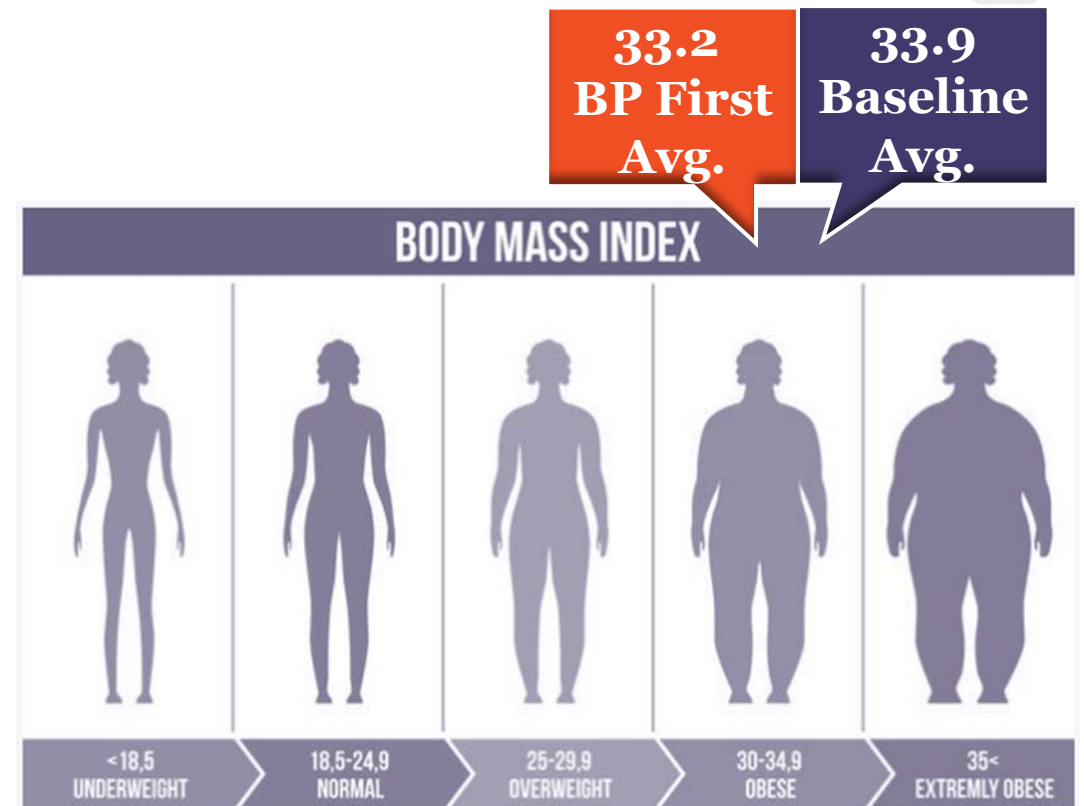
*Citation: The Community Guide²

BMI

Net average reduction of BMI in 6 months of 2.1%



In a systematic review of randomized controlled trials*, participating employees reduced their average BMI by 0.5 after 12 months



*Citation: The Community Guide¹

National Hypertension Control Roundtable

The NHCR is a coalition of public, private, and nonprofit organizations dedicated to eliminating disparities in hypertension control through dialogue, partnership, evidence, and innovation.

Visit www.hypertensioncontrol.org for more information and to join us.

 twitter.com/HtnRoundtable

 youtube.com/@nationalhypertensioncontrol

 linkedin.com/company/national-hypertension-control-roundtable



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Impact of Hypertension- Total Employee Population



Total Employees

161,031,000



Estimated Number of
Covered Employees
with Hypertension

46,473,547



Additional per Employee
Annual Cost
of Hypertension

\$3,588



Additional Total Annual Cost
due to Hypertension

\$166,764,022,954

Building the Business Case for Employers ...

to invest in hypertension prevention and control using a mixed methods approach that encompasses three components:

- (1) understanding context and evidence to date,
- (2) quantifying the impact and cost of hypertension through development of a Budget Impact Model and a Claims Analysis Template, and
- (3) developing and disseminating the business case for employers to take action.



So, What Does a Comprehensive Approach to Hypertension Include?

Methods

- Informal conversations with members to find out what they are already doing
- Literature review and Internet search
- Review of CDC Foundation/FTI reports
- Input from GPBCH Employee Health & Well-being Interest Group

Results

- “Comprehensive Benefit Design” document with seven key strategies
- Explanation and bulleted list for each strategy
- Resources/additional information

Strategy 1: Primary Prevention/Lifestyle Support

- Healthy eating and physical activity programs
- Availability of healthy foods, including low-sodium options
- Promote smoke-free campus and smoking cessation
- Education and resources to limit alcohol intake
- Education and resources to promote healthy sleep
- Promote healthy weight: lifestyle, Rx benefit, surgical benefit
- Promote access to mental health resources, including EAP



Strategy 2: Screening

Blood Pressure Categories



BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120-129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130-139	or	80-89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

heart.org/bplevels

- Promote primary care relationships
- Incorporate BP measurement into health fairs and other events
- HRA's should include family history, and self-reported BP, or biometric measurement
- Determine how high BP findings will be referred/followed-up

Strategy 3: Know YOUR Data

Ask health plans and vendors to provide information on:

- **Population prevalence of hypertension**
- **Subgroup differences: age, gender, race/ethnicity, co-morbidities...**
- **What % of population has a primary care relationship**
- **What % of population with HTN is on pharmacotherapy**
- **For those on pharmacotherapy, what is the adherence rate**
- **How were each of these measured?**

Track progress over time, looking at prevalence and cost

3b: Additional Questions for Health Plans

- What are your commercial HEDIS rates for the hypertension measures?
- What programs are you offering to manage hypertension?
- Is it possible to capture blood pressure in claims data?
- How are you trying to foster primary care relationships, especially for people with hypertension?

Controlling High Blood Pressure

Measure Year	Commerical HMO	Commercial PPO	Medicaid HMO	Medicare HMO	Medicare PPO
2021	60.3	50.8	58.6	70.4	70.1

Strategy 4: Benefit Design Considerations

- Value-based insurance design (V-BID): HTN medications
- Coverage of self-monitoring BP cuffs (of good quality)
- Pharmacist review of formulary

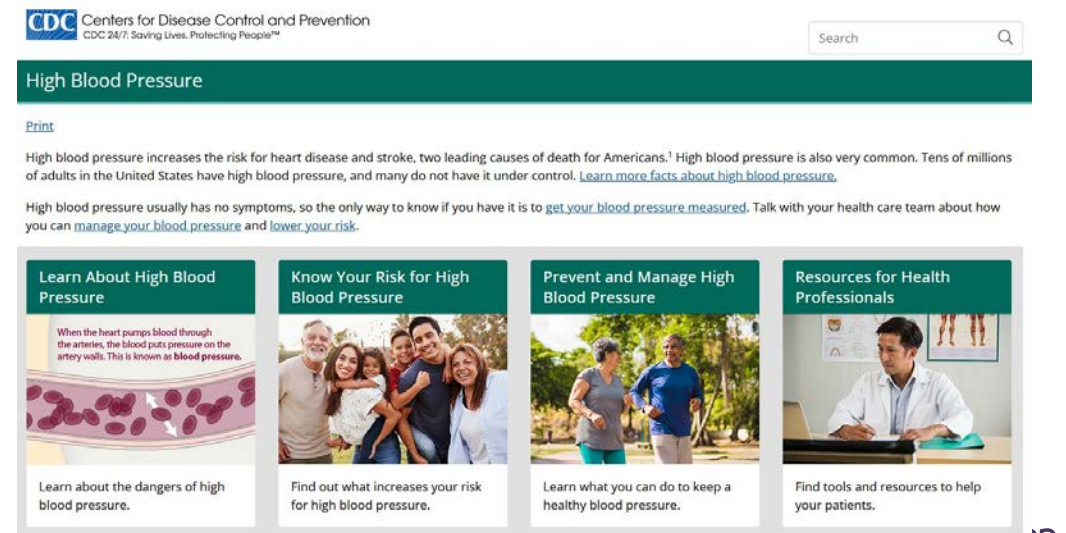


Strategy 5: Promoting Appropriate Care Management

- Ensure that all people with diagnosed HTN have a PCP
- Assess health plan programs and resources to support patient education and high-quality care
- Implement MTM or CMM (pharmacist review) for those with co-morbidities
- Consider outsourcing to a HTN management vendor, or providing access to self-management apps
- Ensure appropriate follow-up for hospitalizations related to HTN

Strategy 6: Promote a Supported Workforce

- Links to resources from AHA, CDC, and other organizations
- Easy access (including \$) to educational tools and programs
- Identify existing resources for individual counseling (e.g. registered dietitian), and consider adding services
- Recognize impact of SDoH; identify and address inequities
- Consider fostering patient resource groups



The screenshot shows the CDC website page for High Blood Pressure. At the top left is the CDC logo with the text "Centers for Disease Control and Prevention" and "CDC 24/7: Saving Lives. Protecting People™". To the right is a search bar. Below the header is a green bar with the text "High Blood Pressure". Underneath is a "Print" link. The main text reads: "High blood pressure increases the risk for heart disease and stroke, two leading causes of death for Americans.¹ High blood pressure is also very common. Tens of millions of adults in the United States have high blood pressure, and many do not have it under control. [Learn more facts about high blood pressure.](#)" Below this is another paragraph: "High blood pressure usually has no symptoms, so the only way to know if you have it is to [get your blood pressure measured](#). Talk with your health care team about how you can [manage your blood pressure](#) and [lower your risk](#)." At the bottom, there are four green-titled boxes: "Learn About High Blood Pressure" (with an illustration of blood vessels), "Know Your Risk for High Blood Pressure" (with a photo of a family), "Prevent and Manage High Blood Pressure" (with a photo of two people walking), and "Resources for Health Professionals" (with a photo of a doctor at a desk).

Strategy 7: Evaluate Your Efforts

[Refer back to strategy 3: Know your data]

At least annually, track these key metrics:

- **Hypertension prevalence**
- **Hypertension control**
- **Obesity prevalence**
- **Incidence rates and costs for HTN-related events (cardiac and cerebrovascular)**
- **Overall trends in direct cost for total population, and HTN sub-group**

Final Recommendations

- Recognize HTN as a significant driver of morbidity, mortality, and cost
- Take a comprehensive approach: many suggestions are no- or low-cost
- Treat the recommendations as a checklist, to track progress
- Take a “whole person health” view – many of the recommendations for hypertension apply equally well to other chronic diseases (especially obesity)

Next Step: Employer Engagement: WE NEED YOU!!!

- Testing of the economic model and providing feedback (estimated 2 hour commitment)
- Commitment to developing a plan to address HTN, incorporating strategies and recommendations
- Potential to create a small group learning collaborative to meet quarterly