ACTION BRIEF

A Future Forward for a Healthier Tennessee

Tackling Tennessee's Workforce Health Challenges

Addressing Underlying Drivers of Chronic Conditions

Tennessee is known for its natural beauty, rich music heritage, gracious hospitality, and diverse culture. It is also known for the poor and worsening health of its people. Tennesseans are more likely to smoke, less likely to exercise, less likely to have a college degree, more likely to come from single parent families, and more likely to suffer from depression, obesity, diabetes, hypertension, and cardiovascular disease than other states.[1]

People with diabetes cost

2.3 TIMES MORE

than those without diabetes **(around $16,000 per year)**

Hypertension

ADDS $2,000

to annual per person medical costs.

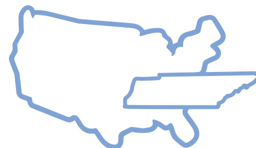
Source: American Diabetes Association; American Heart Association

ACTION STEPS FOR EMPLOYERS

(see details about each action step starting on page 3):

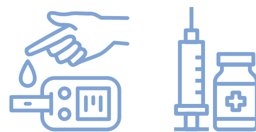
1. **Review data to determine risks and opportunities.**
2. **Manage the risk continuum of obesity.**
3. **Consider the impact of social determinants of health.**
4. **Deploy effective benefit designs.**
5. **Contract with quality vendors.**

Tennessee has the



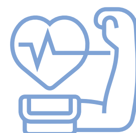
4th HIGHEST RATE OF DIABETES

in the nation, and the



6th HIGHEST RATE OF HYPERTENSION

in the nation.[2]



Many people with hypertension, prediabetes and diabetes do not know they have these conditions, which strongly correlate with each other as co-occurring conditions. For example, three of four adults with diabetes also have hypertension.[3]

Despite investing heavily in managing these diseases, the Behavioral Risk Factor Surveillance System data shows that the upward trend continues for diabetes, increasing from 11.2% in 2011 to 14.1% in 2020 and for hypertension has remained much higher than the US at 37.7% in 2021. Therefore, there is an urgent need to:

- Improve disease prevention strategies.
- Better manage chronic conditions.
- Identify and intervene on behalf of at-risk populations.
- Select partners with proven success rates.

Fast Facts

- According to a study by the Sycamore Institute, Tennessee's excess cost burden for diabetes and hypertension (the burden related to its higher than national prevalence) is $1.4 billion in direct medical costs, productivity and premature death.
- The American Diabetes Association estimates that the total cost for diabetes in Tennessee is $7.3 billion annually.[6]
- The Better Tennessee report found that diabetes alone costs the state $1.7 billion annually in lost productivity.[7]

Demographic Age Bands	Adults in TN with		
	Hypertension	Pre-Diabetes*	Diabetes
Age 18–24	9.3%	4.5%	0.7%
Age 25–34	14.8%	5.8%	2.9%
Age 35–44	26.6%	7.7%	5.6%
Age 45–54	37.5%	12.4%	15.9%
Age 55–64	55.2%	14.8%	24.8%
Age 65+	65.0%	12.9%	27.4%

Years: 2021, *2019

As the prevalence of chronic conditions increases nationwide, and if they continue to grow at a higher rate in Tennessee, there is a risk of losing economic opportunities for the state. Additionally, the high costs associated with these conditions will contribute to the ongoing and unsustainable escalation of healthcare costs for everyone in Tennessee.

Impact of Chronic Disease on Workforce and Employer

Although diabetes and hypertension risk increases with age, there is a significant percentage of the workforce population with these chronic conditions. Considering that some of the main risk factors, like obesity, are increasing among all age groups, informed predictions show an increasing number of workforce-age people acquiring these diseases—and the serious complications that accompany them, particularly if not properly managed.[4]

The importance of workforce wellbeing is incalculable. Complications for these diseases when they go uncontrolled include stroke, heart attack, kidney disease, amputation, and blindness.[5] These diseases impact costs for both the employer and for people living with these diseases.

Many industries in Tennessee are experiencing labor shortages due, in part, to high rates of chronic disease. Hypertension and diabetes, which often emerge during productive work years, contribute to productivity, absenteeism and presenteeism challenges. In safety sensitive jobs, these conditions increase risks and can contribute to premature retirement.[6]

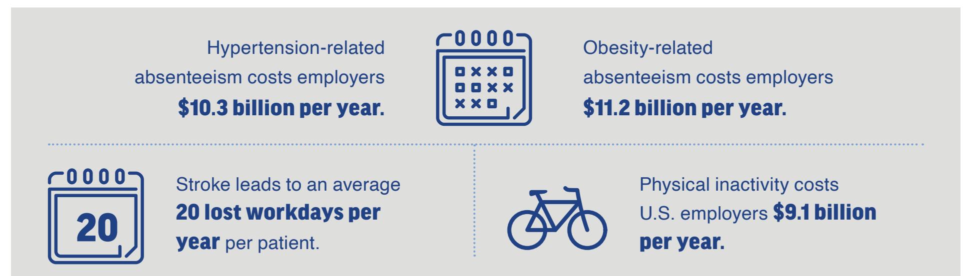
Drivers of Hypertension and Diabetes: Obesity and Social Determinants of Health (SDoH)

Obesity, now considered by the CDC to be an epidemic, continues to be the most significant health-risk factor in hypertension and diabetes, with excess weight accounting for 65%–78% of the essential primary risk for hypertension.[7] About 90% of people with type 2 diabetes are either overweight or obese.[8]

The CDC reports that "From 1999 –2000 through 2017–March 2020, US obesity prevalence increased from 30.5% to 41.9% in the US. During the same time, the prevalence of severe obesity increased from 4.7% to 9.2%."[9] As the map shows, the obesity prevalence is even higher in Tennessee and varies widely across the state with approximately 39% of Tennessee counties at or above the national average.

These sobering statistics can and must ignite action for better managing increasing obesity rates to lower incidence of disease.

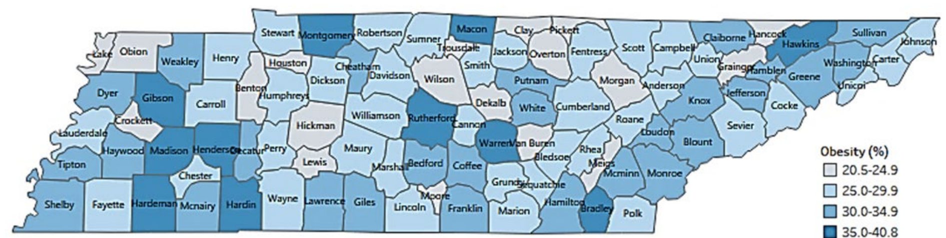
Effects of Indirect Cost of Chronic Illnesses on Employers



Source: National Alliance of Healthcare Purchaser Coalitions Optimal Cardiovascular Prevention and Care

> *"Poor health shrinks our workforce."*
>
> –Sycamore Institute, "The Economic Impact of Chronic Disease in Tennessee"

Adults with Obesity in TN by County



Obesity Prevalence (2019)
TN: 36.5%; U.S.: 32.1%

Adult obesity rates by county ranged from 20.5% (Morgan) to 40.8% (Macon).

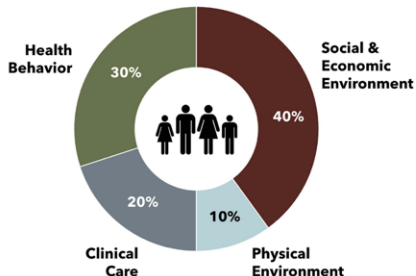
Note: Prevalence of obesity is the percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m² by county which is based on 2019 estimates from the BRFSS.

Data Source: Centers for Disease Control and Prevention Diabetes Surveillance Atlas, 2019

Why SDoH Matters to Organizations and Communities

There is a strong correlation between obesity, hypertension and diabetes, and SDoH—environmental and socioeconomic factors workers bring to their jobs.

The Drivers of Health



Source: County Health Rankings and Roadmaps Model

In addition to the well-established impact of diet, exercise, sleep, and healthy weight, these factors also impact hypertension and diabetes:

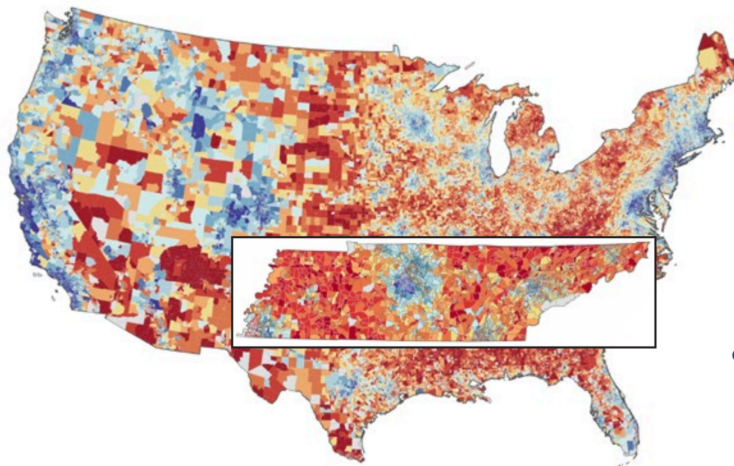
- Income and social protection
- Education
- Unemployment and job insecurity
- Working life conditions
- Food insecurity
- Housing, basic amenities, and environment
- Early childhood development
- Social inclusion and non-discrimination
- Structural conflict
- Access to high-quality, affordable healthcare services

Tennessee includes some of the most vulnerable neighborhoods in the nation

Employees bring the context of their lives to work every day—neighborhood concerns, economic stress, transportation accessibility, unstable housing, food insecurity, and more. These affect their work directly and indirectly in terms of ability to show up on time, capacity to meet job requirements, attention and focus, and employment longevity.

These non-medical risk factors demonstrate the challenges facing employers as they strive to understand and improve conditions that contribute to overall workforce health.

Area Deprivation Index



The Area Deprivation Index ranks neighborhoods on the basis of socioeconomic disadvantage in the areas of income, education, employment, and housing quality.

Note: Areas shaded red represent neighborhoods with higher disadvantage than those shaded blue.

EMPLOYER ACTION

Employers can take the following actions to address the drivers of chronic conditions and help prevent and encourage treatment for these risks and conditions.

1. Review data to determine risks and opportunities

- **Get the Data.** The recent Consolidated Appropriations Act (CAA) legislation gives employers enhanced leverage to demand unfettered access to the data service providers collect. Self-funded employers benefit from contracting with independent data warehouses and analytic firms to analyze data, to identify opportunities and conduct benchmarking and program evaluation.
- **Analyze the data.** Run a basic set of claims data analyses to understand opportunities for risk reduction and condition management.
  - Screening rates and prevalence rates
  - Engagement in chronic condition management programs
  - Claims costs
- **Benchmark the data.** Benchmark analyses at least regionally and, perhaps, statewide, nationally, and within a specific industry. Benchmarks must be from objective sources and not limited to the vendor's customer base.
- **Look within the data.** Employers will gain a deeper understanding of barriers and opportunities if measures are broken down by demographics (such as age, gender, race/ethnicity, income, education, subscriber/dependent). Employers can augment their claims data with this type of data from their human resource information systems.

2. Manage the risk continuum of obesity

Because obesity is often an underlying cause of diabetes and hypertension, a comprehensive, evidence-based obesity benefit design is needed to reach as many employees as possible with tailored approaches.

Depending on BMI, employees need an array of benefits and programs to support healthy weight loss. Lifestyle management and behavioral therapy are needed at all stages of BMI, and should be coupled with pharmacotherapy and surgery, as medically indicated.

Using this comprehensive benefit design as a road map, employers can inventory their benefits and programs, identify gaps, and establish a plan to evaluate how programs and service providers are performing.

Lifestyle Intervention

Without lifestyle changes, most people with prediabetes will develop type 2 diabetes in 5–6 years. It is essential for employers to offer interventional programs such as the CDC's National Diabetes Prevention Program (National DPP).

The National DPP:

- Can prevent or delay type 2 diabetes by 58%.

Obesity Risk Continuum

Treatment	BMI Category				
	25 - 26.9	27 - 29.9	30 - 34.9	35 - 39.9	40+
Lifestyle Management, Behavioral therapy	Yes w/ comorbidities	Yes	Yes	Yes	Yes
Pharmacotherapy		Yes w/ comorbidities	Yes	Yes	Yes
Surgery				Yes w/ comorbidities	Yes

Source: NIH/NDEP: Guiding Principles for the Care for People With and At Risk for Diabetes

- Offers a full year of support to achieve and maintain lifestyle changes.
- Is built on a CDC-required curriculum grounded in proven lifestyle change approaches.
- Requires recognized providers to adhere to CDC's scientific standards and outcomes monitoring.
- Can be offered through different modalities (e.g., in-person, online, etc.).
- Has a three-year ROI of approximately $8,015 compared to a program cost of approximately $600 per participant.

Pharmacotherapy

- Where possible, remove financial barriers, such as deductibles, co-pays/co-insurancs, for FDA-approved weight loss treatment.
- Include reasonable prior authorization for medications to ensure only appropriate treatment is approved.

Surgical Intervention

- Offer a high-quality center of excellence that has proven, long-term, successful outcomes.
- Bundle pricing to manage risk of complications.
- Pre-qualify patients to identify good candidates for success.

3. Consider the impact of social determinants of health

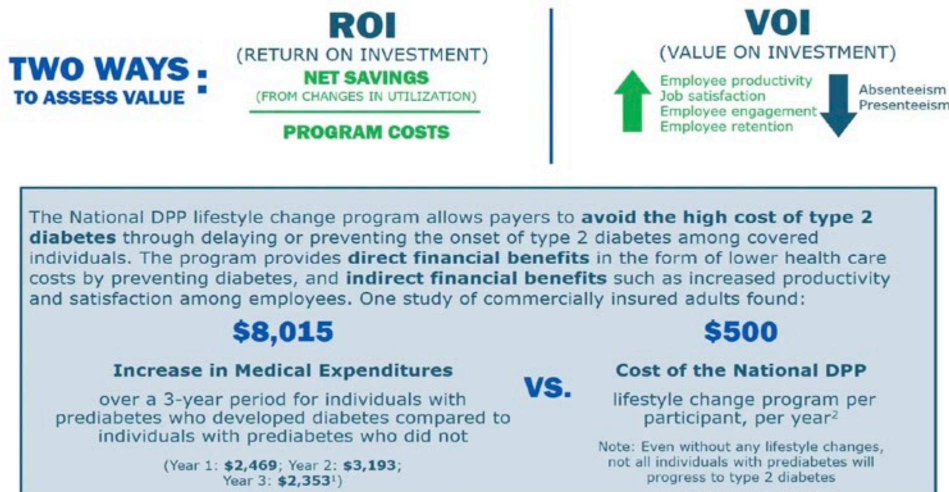
Employers serious about addressing SDoH can make a meaningful impact for employees who have needs that prevent them from being as healthy as they can be by providing advantages at the worksite and benefits that ease access to care for them and their families. This simple continuum will help employers identify a starting point.

Employers may consider benefits strategies such as:

- Salary-banded employee premium contributions ("made more, paid more")
- Funded HSAs for low-wage employees
- Public transportation options and incentives
- Childcare and/or elder care support programs
- Tuition support and career training
- Worksite farmers' markets or vouchers to farmers' markets

Return on Investment for National DPP

The CDC National Diabetes Prevention Program proves Type II Diabetes is not inevitable for Patients with Prediabetes.

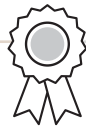


SOURCES: 1. Kahn, T., Tsipas, S., Wozniak, G., Medical Care Expenditures for Individuals with Prediabetes. Population Health Management, 2017. | 2. CDC. How Type 2 Diabetes Affects Your Workforce, 2018.

BRONZE

“Getting Started”

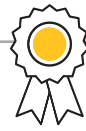
Employers can use age and gender breakdowns to look for sub-populations that have disparities in benefits participation, utilization, engagement, and compliance. Further, employers can use a ZIP code analysis and standard tools to create ZIP code heat maps of where employees live to compare with publicly available data bases that present SDoH statistics and heat maps.



SILVER

“Making a Commitment”

Employers with access to human resource information systems (HRIS) data can augment their claims data with relevant HR fields, such as race, salary, standard occupational codes, job position, and job location. As with Bronze, Silver employers can use publicly available data bases for benchmarking and comparison.



GOLD

“All-In”

Employers may choose to push data vendors to integrate sophisticated SDoH analytics into reporting tools. The best data comes directly from employees. However, there are a variety of vendors aggregating publicly available data sets and third-party claims and survey data that allow employers to supplement known data with imputed data to profile their workforce based on SDoH.

- Affordable healthy meals for purchase at worksite cafeterias, including take-home meals

Employers are encouraged to ask vendors:

- What are they doing to identify and address SDoH?
- Which specific issues are they focused on and what are the results?
- What are best industry practices?
- How are they addressing SDoH for your unique employee population?

4. Deploy effective benefit designs

Employers are encouraged to use benefit designs and programs to eliminate barriers to high-value care for those with chronic conditions. For example:

- Reduce or eliminate out-of-pocket costs for primary care physician visits and essential medications.
- For high-deductible health plans:
  - Expand pre-deductible coverage for medications and services that help control chronic illnesses.
  - Enhance affordability for lower-wage earners through employer contributions to HSAs or HRAs.
- Other considerations
  - Implement flextime or breaks that allow for exercise.
  - Review food and pricing incentives in cafeterias.
  - Sponsor healthy eating and cooking demonstration lunch-and-learns.

5. Contract with quality vendors

- Employers should contract for evidence-based disease management. For example, hypertension management programs should:
  - Have outcomes reporting that they successfully prevent or reduce systolic blood pressure.
  - Include programs/coaching that encourage behavior change such as diet, physical activity, tobacco cessation.
  - Increase medication adherence.
  - Promote regular clinician visits to measure blood pressure.
  - Promote accurate blood pressure self-monitoring between clinician visits.
- Employers can also incorporate performance guarantees and termination clauses in contracts to hold vendors accountable.

Health plans continue to form part of the chronic condition management strategy. Employers need to be persistent in pushing health plans for HEDIS data specific to network providers serving members. Employers can also encourage brokers and consultants to introduce them to an array of point solutions, understanding direct and indirect compensation arrangements.

Notes

1 https://www.countyhealthrankings.org/explore-health-rankings/tennessee?year=2023&tab=1
2 America's Health Rankings, 2021 Annual Report (BRFSS Data). United Health Foundation.
3 https://pubmed.ncbi.nlm.nih.gov/21466619/
4 https://www.webmd.com/hypertension-high-blood-pressure/guide/high-blood-pressure#:~:text=Typically%2C%20blood%20pressure%20increases%20with,blood%20pressure%20also%20increases%20risk.
5 https://diabetes.org/sites/default/files/2022-04/ADV_2022_State_Fact_sheets_all_rev_TN-4-4-22.pdf
6 https://www.sycamoreinstitutetn.org/health-workforce-development/
7 https://www.ahajournals.org/doi/10.1161/circresaha.116.305697#:~:text=Excess%20weight%20gain%2C%20especially%20when,human%20primary%20(essential)%20hypertension.
8 https://bettertennessee.com/diabetes-report-card/
9 https://www.cdc.gov/obesity/data/adult.html

Resources

- Novo Nordisk WORKS™
- St. Louis Business Health Coalition Benefits Check-Up for Heart Disease and Diabetes
- Leading By Example and Moving Upstream Together (*Action Brief*)
- Understanding Health Equity in the Workplace (*Action Brief*)
- The New Science of Obesity (*Action Brief*)
- The New Science of Obesity (Video)

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