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The Economic and Labor Force Impact of Overweight and Obesity: State and National Estimates

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See the national and individual state factsheets at https://www.globaldata.com/health-economics/US/

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Executive Summary

Obesity is a chronic and increasingly prevalent disease across the United States. The National Health and Nutrition Examination Survey (NHANES) finds that 72% of adults have obesity (40.3%) or overweight (31.7%), as measured by body mass index (BMI) calculated from directly measured height and weight. Obesity and overweight are well-established risk factors for type 2 diabetes, cardiovascular disease, certain cancers, musculoskeletal disorders, and other serious chronic conditions. The clinical burden of these associated conditions translates into higher medical expenditures across payers and care settings, as well as reduced workforce participation, lower productivity, increased disability, and premature mortality.

This report estimates the economic, workforce, and fiscal implications of obesity and overweight at the state and national level for working-age adults ages 18–64. The analysis is conducted from the perspective of individual states, focusing on outcomes that directly affect state economies and budgets — including workforce impacts, employer costs, state Medicaid expenditures, and state and local tax revenues. Results are also aggregated across states to produce national totals, supplemented with federal Medicaid and Medicare expenditures attributable to obesity and overweight. This report serves as the technical documentation underlying state-level factsheets for all 50 states and the District of Columbia, and the Commonwealth of Puerto Rico, available at https://www.globaldata.com/health-economics/US/. All estimates are expressed in 2025 dollars and apply to the 2025 population, and the analysis focuses on working-age adults who are currently in the workforce or who would have been in the workforce absent obesity.

Key findings for 2025 include:

Economic Impact and Healthcare Costs

The economic burden of obesity and overweight can be measured from two complementary perspectives. The first captures the shortfall in total economic output relative to what it would have been absent obesity and overweight. The second tallies costs borne by identifiable payers in a given year.

- Obesity and overweight reduced U.S. economic output by $495.3 billion in 2025 (1.6% of GDP), reflecting foregone output from reduced labor force participation, premature mortality, reduced productivity, and the economic multiplier effect (Exhibit ES-1). This estimate excludes higher healthcare costs, which represent a reallocation of spending within the economy rather than a reduction in economic output.

- Total current-year obesity and overweight costs to identifiable payers were estimated at $496.5 billion (Exhibit ES-2), comprising approximately $264.0 billion in direct income losses from reduced labor force participation, premature mortality, and reduced productivity, and $232.5 billion in higher healthcare expenditures — equivalent to 4.2% of national healthcare spending — borne by households ($31.5 billion), employers ($69.7 billion), state Medicaid programs ($24.9 billion), federal Medicaid ($34.8 billion), and Medicare ($71.6 billion). This estimate excludes the economic multiplier effect. It also under-represents total national societal cost because it omits the costs of premature mortality beyond lost earnings.

Workforce Impacts

- An estimated 900,600 fewer adults were in the 2025 workforce due to obesity, including 229,500 women with reduced labor force participation and 671, 100 workers absent due to premature deaths over the prior decade, representing approximately 598,300 obesity-attributed deaths annually.

- Women bear a disproportionate share of obesity's labor force impact, accounting for 25.5% (229,500 of 900,600) of the 2025 workforce shortfall. Women with obesity also experience a 3-percentage-point earnings disadvantage relative to women with healthy weight; no comparable effect is observed for men.

Government Fiscal Impact

- The combined state budget impact is $52.7 billion in 2025: $16.9 billion in reduced tax revenues, $24.9 billion in higher Medicaid costs, and $10.9 billion in higher state and local government employee healthcare costs.
- Combined federal Medicare and Medicaid expenditures attributable to obesity and overweight totaled $106.4 billion, comprising $71.6 billion in Medicare expenditures and $34.8 billion in federal Medicaid.

State-Level Variation

- The economic burden falls disproportionately on Southern and Appalachian states, where state economies bear 2.2–2.6% GDP shortfalls. Highest GDP burdens were seen in Mississippi (2.6%), West Virginia (2.5%), Alabama (2.4%), and Oklahoma (2.4%), and lowest in the District of Columbia (0.6%) and Washington State (1.1%).

Medical Cost Savings Potential from Obesity Treatment

- Sustained weight loss among adults with obesity is associated with substantial reductions in medical costs, diabetes incidence, and mortality. Even modest sustained weight loss of 5% — which would move 18% of people with obesity below the obesity threshold — is projected to generate $661 billion in national medical cost savings over 10 years (Exhibit ES-3). These estimates exclude treatment costs.
- Projected savings scale substantially with the degree of sustained weight loss, reaching $1.4 trillion over 10 years at 25% sustained weight loss, at which point 68% of people with obesity would no longer meet the obesity threshold.

Recommendations to Policymakers and Employers

In this report we provide additional detail of the following recommendations intended to improve access to modern, evidence-based obesity treatment and to improve health outcomes and reduce the workforce, fiscal, and economic costs documented in this report. In brief, these recommendations encompass:

Federal Policymakers

- Support implementation of Medicare's Bridge program and the Medicaid BALANCE model[a]
- Promote insurance coverage for comprehensive obesity treatment for federal government employees
- Expand access to comprehensive obesity treatment in rural and high-burden communities
- Expand Medicaid coverage for obesity treatment, building on CMMI models such as BALANCE
- Invest in community-based programs and education campaigns

State Policymakers

- Expand access to comprehensive Medicaid coverage for obesity treatment
- Promote insurance coverage for comprehensive obesity treatment for state government employees

[a] The Better Approaches to Lifestyle and Nutrition for Comprehensive Health (BALANCE) Model is a voluntary CMMI demonstration expanding beneficiary access to GLP-1 therapies for obesity treatment under Medicaid, with state participation beginning May 2026 and extension to Medicare Part D contingent on subsequent CMS implementation. The Medicare GLP-1 Bridge is a short-term CMS payment demonstration providing interim coverage of FDA-approved obesity medications for Medicare Part D beneficiaries beginning July 2026.

- Expand access to obesity treatment in rural and high-burden communities

State and Private Employers

- Offer insurance coverage and wellness programs for obesity care at parity with other chronic diseases
- Foster a culture of support and inclusion for employees with obesity
- Encourage market changes through suppliers and vendors to improve coverage terms and expand provider networks
- Provide education and resources on obesity's health consequences and treatment options

Exhibit ES- 1. Impact of Obesity and Overweight on the U.S. Gross Domestic Product in 2025

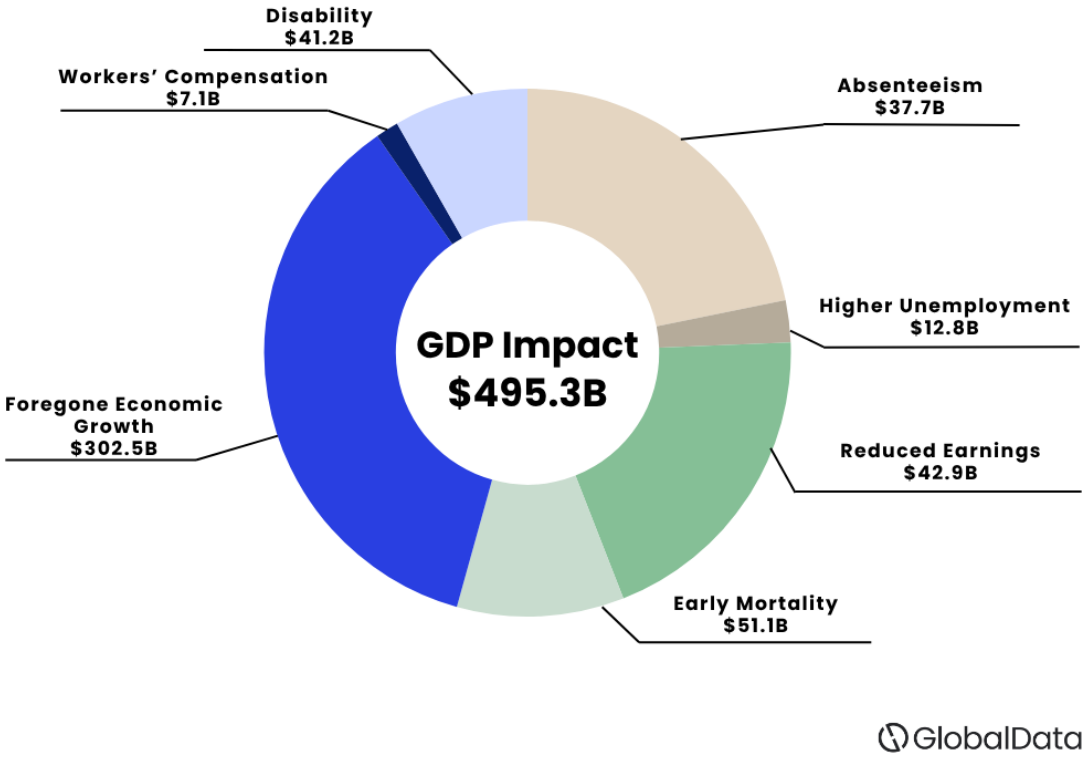
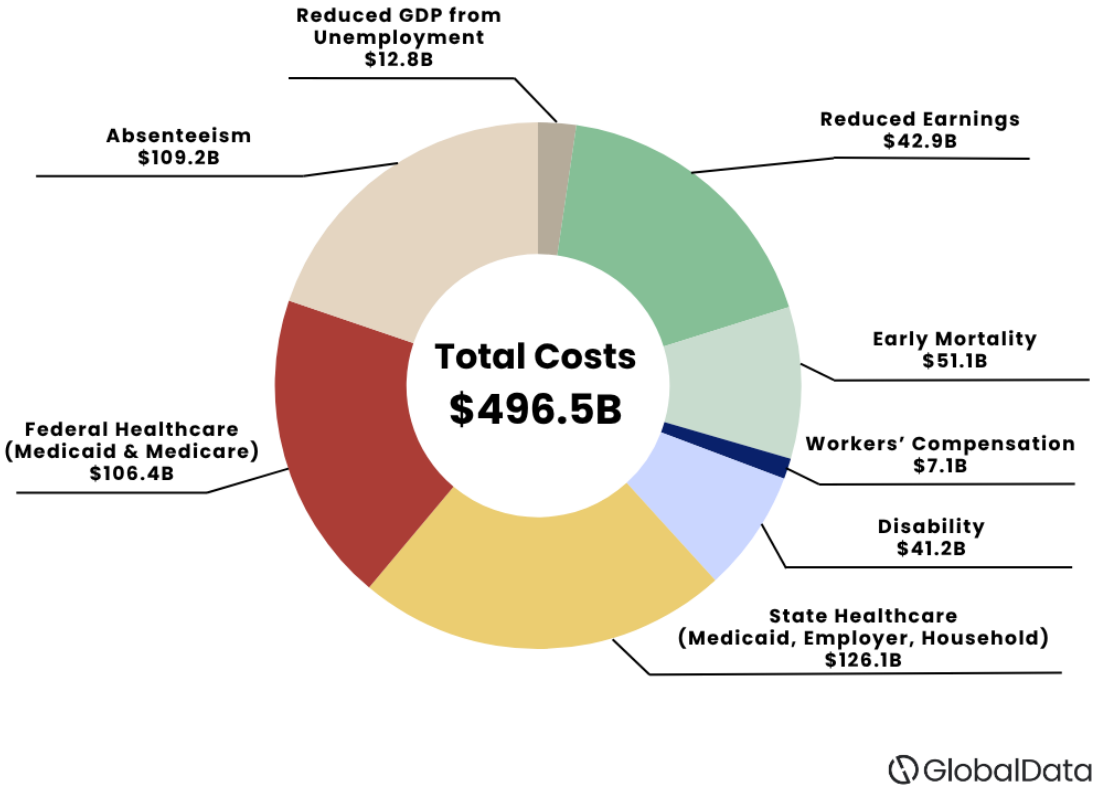


Exhibit ES- 2. The National Economic Cost of Obesity and Overweight in 2025



Note: Individual cost components might not sum to the total shown due to rounding.

Exhibit ES- 3. National 10-Year Medical Cost Savings Potential from Obesity Treatment

Sustained Weight Loss	% Adults with Obesity Exiting Obesity	Diabetes Reduction	10-Year Medical Savings	Mortality Reduction*
5% weight loss	18% of population with obesity	15.6% lower incidence	$661 billion	1.9% lower
10% weight loss	34% of population with obesity	20.3% lower incidence	$850 billion	2.2% lower
15% weight loss	48% of population with obesity	25.6% lower incidence	$1.0 trillion	2.6% lower
20% weight loss	58% of population with obesity	36.3% lower incidence	$1.3 trillion	3.2% lower
25% weight loss	68% of population with obesity	52.5% lower incidence	$1.4 trillion	2.8% lower

Source: GlobalData.

Notes: Modeled savings estimates are based on treating all adults with obesity. Treatment costs are excluded. * Modeled outcomes reflect microsimulation results, which can exhibit modest non-monotonicity across scenarios due to stochastic variation inherent to the modeling approach.

Background

Obesity is a chronic and increasingly prevalent disease across the United States. The National Health and Nutrition Examination Survey (NHANES) finds that 72% of adults have obesity (40.3%) or overweight (31.7%), as defined by measured height and weight to calculate body mass index (BMI).[1]

Obesity and overweight are well-established risk factors for a broad range of serious chronic conditions, including type 2 diabetes, cardiovascular disease, certain cancers, and musculoskeletal disorders.[2–10] The clinical burden of these associated conditions translates directly into higher medical expenditures across payers and care settings, as well as elevated rates of premature mortality among affected individuals. Published studies estimate direct and indirect costs at approximately 1.6% of GDP, with broader estimates ranging from 2.0% to 3.3% when indirect costs such as lost productivity, premature mortality, and reduced labor force participation are more fully captured.[11,12]

The economic and workforce consequences of obesity documented in this report underscore the relevance of policies that expand access to person-centric and comprehensive obesity prevention and treatment. This report serves as the technical documentation for state-level factsheets available at https://www.globaldata.com/health-economics/US/, providing the data sources, methods, and assumptions underlying each estimate. Those factsheets describe how excess body weight directly and indirectly affects the workforce and employers, state Medicaid expenditures, and state and local government revenues and budgets. This report summarizes those state-perspective estimates and supplements them with federal Medicare and Medicaid expenditures attributable to overweight and obesity to produce a national estimate of the total economic burden. The report concludes with recommendations for improving access to obesity care.

Approach

Overview

This study was conducted to estimate the economic, workforce, and fiscal implications of obesity and overweight from the perspective of individual states, with the primary objective of producing state-level factsheets for each U.S. state and the District of Columbia, and the Commonwealth of Puerto Rico. The state-perspective analysis focuses on outcomes that directly affect state economies and budgets, including workforce impacts, employer costs, state Medicaid expenditures, and state and local tax revenues. This report summarizes those state-level results and supplements them with federal healthcare expenditures, specifically federal Medicaid and Medicare spending attributable to overweight and obesity, to provide a more complete picture of the national economic burden. National totals are the sum of state-level (and District of Columbia and Commonwealth of Puerto Rico) estimates except where noted. All estimates are expressed in 2025 dollars. The analysis focuses on working-age adults ages 18–64 who are currently in the workforce or who would have been in the workforce absent obesity; because this age range excludes most Medicare beneficiaries, Medicare cost estimates are modeled separately using the Medicare beneficiary population as described below.

Healthcare cost implications are modeled for three insured populations: commercially insured adults, including insured federal, state, and local government employees; Medicaid beneficiaries; and Medicare beneficiaries. The commercial and Medicaid populations are modeled at the state level and included in both the state factsheets and the national total. Medicare is also modeled at the state level to produce a national total but is excluded from the individual state factsheets because Medicare is a federal program and its costs do not accrue to state budgets. Costs to the uninsured population are excluded; because uninsured individuals with obesity have lower rates of healthcare utilization, this exclusion is expected to have a modest effect on total estimates.

State-level estimates of working-age adults ages 18–64 are summed to produce national totals for all outcome measures, including GDP loss, lost state tax revenues, workforce reductions, absenteeism and disability costs, employer healthcare costs, household medical costs, and Medicare expenditures. Medicaid expenditures are modeled using state-specific data, with each state's published cost-sharing ratio applied to derive the state and federal shares. State factsheets report only the state share, as that is the portion that directly affects state budgets. This report additionally presents the federal share for each state, enabling both a complete state-by-state accounting of Medicaid costs and an accurate national total reflecting the full federal and state burden.

Exhibit 1 summarizes which economic components are included in the state factsheets and the national total, and how each is derived. Subsequent subsections describe the data sources, methods, and assumptions underlying each component.

Exhibit 1. Summary of Study Components

Economic Component	State Analysis	National Total
Healthcare costs		
Employer healthcare costs (commercially insured, including government employees)	Included	Sum of states
Household medical costs (commercially insured)	Included	Sum of states
Medicaid expenditures	State's share	State & federal share
Medicare expenditures	Excluded*	Sum of states
Workforce and economy impacts		
Workforce reduction (labor force participation)	Included	Sum of states
Workforce reduction (premature mortality)	Included	Sum of states
Absenteeism	Included	Sum of states
Disability costs	Included	Sum of states
Reduced productivity (reduced earnings)	Included	Sum of states
GDP loss and reduced economic growth	Included	Sum of states
Government budget impact		
Lost state tax revenues	Included	Sum of states
Lost federal tax revenues	Excluded	Excluded
State government employee healthcare costs	Included	Sum of states
Federal government employee healthcare costs	Excluded	Excluded
Medicaid expenditures	State's share	State & federal share
Medicare expenditures	Excluded*	Sum of states
Public assistance costs	Excluded†	Excluded
Medical cost savings from treatment	Included	Sum of states

Notes: * Medicare costs are calculated using state-specific data but are excluded from the state factsheets whose focus is the cost of overweight and obesity from the states' perspective. † State public assistance costs were calculated but excluded from the factsheets because estimated costs were small relative to other components, particularly for less populous states.

Construction of State-Level Representative Population Files

To estimate the economic impact of obesity and overweight at the state level, a representative population file was constructed for each state reflecting the demographic composition and weight distribution of the adult population. The population file is based on a 2024 baseline with 2025 projections applied to reflect current population size and composition in each state.

The core micro data file is built from the 2024 American Community Survey (ACS), which provides the demographic and socioeconomic characteristics of a representative sample of the population in each state, including medical insurance type, household income, and residency setting. Although the Behavioral Risk Factor Surveillance System (BRFSS) provides state-level prevalence estimates for obesity and overweight, it was not used as the sole basis for constructing the population file for several reasons. First, BRFSS is a telephone-based survey and does not adequately capture individuals in institutionalized settings such as nursing homes and residential care facilities. Second, BRFSS intentionally oversamples certain demographic groups, and even after applying survey weights, the resulting sample is less representative of the full state population than the substantially larger ACS. Using the ACS as the population backbone and supplementing it with BRFSS-derived health risk information through statistical matching produces a more accurate and demographically representative population file for each state.

The construction of the population file differs by residency setting. For the non-institutionalized population, each person in the ACS is matched with a similar person in the BRFSS using a statistical matching process with random sampling with replacement. The matching procedure aligns individuals across the ACS and BRFSS on the basis of age group, sex, race/ethnicity, insurance type, and household income, ensuring that the resulting population file reflects each state's actual demographic composition while incorporating BRFSS-derived health risk information. This process preserves the number of records from the ACS file as well as each record's ACS sample weight. For the institutionalized population, residents of nursing homes and residential care facilities, ACS records are matched to person-level data from two national surveys: the Centers for Medicare and Medicaid Services Long-Term Care Minimum Data Set (MDS) and the Medicare Current Beneficiary Survey (MCBS). Matching is performed using random sampling with replacement on the basis of age group, sex, and race/ethnicity, incorporating the detailed clinical and functional characteristics available in those surveys for residents of long-term care settings.

State-level obesity and overweight prevalence rates are drawn from the 2023–2024 BRFSS, an annual state-based telephone survey conducted by the Centers for Disease Control and Prevention (CDC). BMI-based weight status categories follow standard definitions: healthy weight (18.5–<25.0 kg/m²), overweight (25.0–<30.0 kg/m²), and obesity (≥30.0 kg/m²). Because BRFSS relies on self-reported height and weight, measured prevalence rates likely understate the true prevalence of obesity and overweight in the population. While BMI is widely used in population-level research due to its simplicity and availability in large-scale surveys, it does not directly measure body fat or account for its distribution and is therefore an imprecise measure of adiposity at the individual level. For this study, which models outcomes across large geographic units, BMI-based prevalence remains the most appropriate and consistently available measure.[13]

Each record in the resulting population file includes demographic characteristics, health-related lifestyle indicators — including body weight status based on the BRFSS-derived prevalence estimates described above — health conditions, socioeconomic and insurance characteristics, and residency setting. Because the majority of institutionalized individuals are covered by Medicare and are not in the workforce, their inclusion has minimal effect on the estimated economic and fiscal impacts of overweight and obesity from states' perspectives. They are, however, included in the estimates of federal Medicare costs. The resulting state-level population files form the basis for applying the per-person cost estimates described in the subsequent sections, with each individual record assigned applicable cost components based on demographic characteristics and weight status.

Healthcare Costs

Obesity and overweight are associated with substantially higher medical expenditures across all major payer categories. The link between excess body weight and elevated healthcare spending operates largely through the role of obesity as a disease and its role as a risk factor for type 2 diabetes, cardiovascular disease, certain cancers, musculoskeletal disorders, and other chronic conditions that generate sustained utilization of healthcare services.

Dall et al. (2024) estimated excess medical costs of $1,514 per year for commercially insured adults with obesity and $380 for adults with overweight, corresponding to national excess medical costs of $115 billion and $31.5 billion, respectively, in 2023.[14] Adjusted to 2025 dollars using the medical component of the Consumer Price Index, these per-person estimates are $1,620 for adults with obesity and $410 for adults with overweight, and are used in this analysis. The estimated employer share of these costs is 69%, with the remaining 31% borne by households in the form of higher insurance premiums and out-of-pocket costs. Per-capita estimates for employees in the government sector were slightly higher, averaging $1,870 for adults with obesity and $440 for adults with overweight; these figures are used to calculate state budget impacts associated with higher healthcare costs for state and local government employees.

Van Den Broek-Altenburg et al. (2022) estimated that mean annual healthcare spending for adults with overweight was $189, $775, and $700 higher than for adults with healthy weight among the commercially insured, Medicaid, and Medicare populations, respectively.[10] For adults with obesity, per-person incremental costs across classes 1 through 3 ranged from $899 to $2,615 for the commercially insured, $662 to $2,954 for Medicaid enrollees, and $1,759 to $3,775 for Medicare beneficiaries relative to adults with healthy weight. Our analysis uses the Medicaid and Medicare per-capita estimates from Van Den Broek-Altenburg et al. Adjusted to 2025 dollars, overweight is associated with $981 in higher costs per Medicaid enrollee and $830 per Medicare beneficiary. As noted above, these public-payer per-person figures are meaningfully lower than the commercially insured figures in significant part because Medicaid and Medicare reimbursement rates for a given service are typically 30%–50% of commercial reimbursement rates, not because underlying utilization is necessarily lower. To derive a single average cost per person with obesity, estimates across obesity classes 1 through 3 were weighted by the proportion of adults in each class using NHIS data. Adjusted to 2025 dollars, this produces estimates of $1,581 per Medicaid enrollee with obesity and $2,880 per Medicare beneficiary with obesity. For reference, the weighted average across obesity classes for the commercially insured population was $1,588, consistent with the $1,620 estimate from Dall et al. (2024), which drew on more recent data. These estimates are more conservative than those from Cawley et al. (2021), who estimated incremental costs of $2,605 for adults with private insurance and $3,629 for adults with public insurance (2025 dollars, ages 20–65).[8]

When national per-person cost estimates are applied at the state level, a 2025 state-level cost-of-medical-care index is used to adjust for geographic variation in healthcare costs.[15] The state share of Medicaid spending varies by state based on the Federal Medical Assistance Percentage (FMAP); nationally, the state share averages 42.2%. Only the state share of Medicaid costs is included in the state factsheets, as that is the portion that directly affects state budgets. Both the state and federal shares are included in the national total presented in this report.

Labor Force Participation and Earnings

Obesity can affect workforce participation and earnings through two distinct pathways among working-age adults. The first is through health. Obesity is associated with a range of related diseases that impose functional limitations on working-age adults, reducing physical capacity, stamina, and the ability to perform sustained work activity. Research using longitudinal data has found that the effects of obesity on both workforce participation and work limitations are greater for women than for men.[16] The second pathway is through weight-based stigma and discrimination in the labor market.[17] Survey and population-based studies document lower wages for adults with obesity and overweight, and workers with obesity face stereotypical attitudes from employers along with disadvantages in hiring, wages, promotions, and termination.[18] Women with obesity face a significant wage penalty, particularly in public- and client-facing roles, while the evidence is considerably weaker for men.[19,20] Together, these pathways provide the basis for estimating two distinct workforce cost components: reduced labor force participation among adults with obesity, and reduced earnings among women with obesity.

Labor force participation effects are estimated using logistic regression analysis of National Health Interview Survey (NHIS) data (2019–2024), with employment during the prior week as the dependent variable. Separate models are estimated for men and women. Explanatory variables include body weight category (healthy weight, overweight, or obesity), age group

(18–34, 35–44, 45–54, 55–64, 65–75), race/ethnicity, smoking status, and survey year. Prior research using 2017–2021 NHIS data found that women with obesity have 20% lower odds of employment relative to women with healthy weight and men with obesity have 7% lower odds.[21] Our updated analysis, using the same data sources and methods but with later (2019–2024) data, found no obesity employment effect for men and a much smaller 3-percentage-point negative effect on the odds of employment for women. We present this revision as a methodological strength: it reflects more current data and, notably, shows that the workforce burden of obesity remains substantial even under this more conservative estimate. The smaller effect size likely reflects changes in labor market conditions and workforce composition over the intervening period, including shifts in the occupational distribution of women with obesity, broader labor market tightening during 2019–2024, and changing societal attitudes toward obesity. To model the economic costs associated with lower labor force participation, we multiply the reduced number of women with obesity who are employed by average earnings for women in each age group as calculated using the Current Population Survey.

Prior ordinary least squares (OLS) regression analysis of NHIS data found that employed women with obesity earned 9% less than women with healthy weight - an estimate in line with other published studies.[21–24] Our updated OLS regression analysis with newer data found that the obesity-related earnings differential for women is approximately 3% compared to demographically comparable women with healthy weight; no corresponding earnings effect was observed for men. As with the labor force participation estimate above, we present this as an updated, more conservative estimate reflecting the most current available data and methods.

Absenteeism, Disability, and Workers' Compensation

Beyond effects on labor force participation and earnings, obesity imposes costs on employers through three additional workforce channels: absenteeism, disability, and workers' compensation. A systematic review of 50 studies found substantial indirect costs associated with lost productivity among workers with obesity, with absenteeism contributing particularly high costs across the studies reviewed.[25] Research estimating the causal effect of obesity on job absenteeism found that obesity raises absenteeism due to injury or illness by approximately 3.0 days per year relative to healthy weight, with annual national productivity losses estimated at $13.4 to $26.8 billion.[14,26] A retrospective cohort study using MarketScan claims data found that each higher BMI category was associated with an increase in work loss across absenteeism, short-term disability, long-term disability, and workers' compensation.[27] The workers' compensation burden is compounded by higher injury severity among workers with obesity: among workers' compensation claimants sustaining severe injuries, those with obesity had over three times higher odds of incurring claim expenses of $100,000 or more and lower odds of returning to work, compared with claimants with normal weight.[28]

Incremental employer costs per employee with obesity relative to employees with healthy weight are drawn from Shinde et al. (2024), which analyzed MarketScan claims data for approximately 720,000 employees, and adjusted to 2025 dollars using the Consumer Price Index: $1,850 for absenteeism, $700 for short- and long-term disability, and $120 for workers' compensation.[27] State-level estimates are derived by multiplying these national averages by a state cost-of-living index for 2025 to reflect geographic variation in wage levels and costs.

Premature Mortality

Premature mortality is one pathway through which obesity reduces workforce participation. Obesity is associated with elevated mortality risk across a range of underlying conditions, resulting in deaths among adults who would otherwise remain in the workforce. Obesity-attributable premature deaths are estimated using cause-of-death mortality data from the CDC WONDER database (2022–2025), with population attributable fractions calculated from relative risks drawn from published epidemiological studies and applied to each underlying cause of death ICD-10 category.[29–32] This population-attributable-fraction approach, applied across multiple ICD-10 underlying-cause categories, is consistent with the

methodology of Masters et al. (2013), which found that earlier point estimates understated obesity's mortality impact by not adequately accounting for age and cohort variation in obesity's effect on mortality risk.[33,34] Three years of data are averaged to estimate annual rates, increasing the reliability of estimates for smaller states with limited annual death counts. This approach produces estimates of the proportion of deaths associated with obesity by state, five-year age group, and sex.

The workforce impact of premature mortality is calculated by applying demographic-specific labor force participation rates to adults who died prematurely in the prior decade and who would otherwise remain in the workforce in the reference year. Average earnings by age group (<35, 35–44, 45–54, 55–64, 65–69, 70–74) and sex, drawn from the Current Population Survey (CPS), are used to estimate the reduction in GDP attributable to each demographic group that would have been in the workforce in 2025 absent their premature death.

This approach provides a conservative estimate of the productivity impact of premature deaths, as the full value of labor to the economy exceeds wages paid to workers. Wages represent the portion of economic output returned to employees, but each worker also generates value for employers, suppliers, and the broader economy that is not fully reflected in their wage. Beyond productivity, the approach also produces a conservative estimate of the broader societal cost of obesity-related premature mortality for two additional reasons. First, it captures only the lost earnings of individuals who would otherwise have been in the workforce, and therefore assigns no economic value to premature deaths among older adults outside the labor force, a population that accounts for a substantial share of obesity-attributed mortality. Second, the lost-earnings approach reflects only market wages, whereas federal government estimates of the value per statistical life year (VSLY) are substantially larger because they are based on individuals' willingness to pay for reductions in mortality risk, which encompasses the full value people place on their lives beyond market earnings alone. HHS's current low-end estimate of VSLY is $285,000 per life year (in 2025 dollars), with a central estimate of $611,000.[35] Applying VSL-based estimates in place of lost earnings would yield a considerably larger estimate of the societal cost of obesity-attributed premature mortality.

Economic Multiplier and GDP Impact

An economic multiplier captures the total change in economic output resulting from an initial change in income or spending. When a worker loses income, whether due to job loss, reduced hours, or premature death, the effects on the economy extend beyond that individual's direct earnings. The worker's reduced spending on goods and services ripples through the local economy: retailers sell less, suppliers produce less, and other workers in turn have less income to spend. These downstream effects are characterized as indirect effects (reductions in business-to-business activity throughout the supply chain) and induced effects (reductions in household spending by workers employed in affected industries). The sum of direct, indirect, and induced effects, expressed as a ratio to the initial direct change, is the economic multiplier.

Multipliers vary across industries and geographies depending on the degree to which economic activity circulates within the local economy rather than leaking out through imports, savings, or inter-regional transfers. Industries with dense local supply chains and a high proportion of locally employed workers tend to generate larger multipliers. Economies that are more self-sufficient, where supply chain purchases are sourced locally rather than from other regions or countries, also tend to exhibit higher multipliers.

Lost economic activity attributable to obesity and overweight is estimated in two steps. First, direct income losses from reduced labor force participation, premature mortality, lower earnings for women with obesity, absenteeism, and the portion of disability and workers' compensation costs borne by employers are summed at the state level. Second, a state-level economic multiplier is applied to convert these direct income losses into total GDP impact, reflecting the downstream spending effects of reduced household and business income in the local economy. State-level multipliers are derived from the ratio of state GDP to compensation of employees, using Bureau of Economic Analysis (BEA) Gross Domestic Product (GDP) series data.[36] This ratio serves as a proxy for the degree to which each dollar of employee compensation generates

broader economic output within each state. The national multiplier averages approximately 2.0, with state variation between 1.7 and 2.5.

The multiplier framework applied here also captures an inter-state dimension of economic impact. To the extent that obesity reduces economic activity and household income across the nation, any given state is also affected through reduced external demand for its goods and services. Visitors from other states spend less on tourism; businesses and households in other states purchase fewer of the state's exports. These cross-state spillovers mean that the full economic cost of obesity to a given state is not limited to losses arising from its own resident population. The state-level GDP/compensation multipliers used in this analysis implicitly capture some of this broader effect, as state economies are embedded in national supply chains and trade relationships that transmit demand reductions across geographic boundaries.

Not all cost components are subject to the same multiplier. Direct income losses (foregone wages, salaries, and employer payments) represent withdrawals from the productive economy and appropriately receive the full GDP multiplier, as this income would otherwise have circulated through the local economy via household consumption and business investment. Healthcare costs, by contrast, are not subject to the same multiplier for two reasons. First, higher medical expenditures represent a transfer of resources from households and employers to the healthcare sector rather than a withdrawal from the economy, as the healthcare sector itself employs workers and generates economic activity. Second, healthcare spending carries a lower economic multiplier than general consumer spending because a substantial share of medical expenditure flows to nationally- or globally-sourced inputs (pharmaceuticals, medical devices, and insurer administrative costs) that do not recirculate within the local state economy. Consistent with this, the component of household income loss attributable to higher medical insurance premiums, a reallocation of household income toward healthcare rather than broader consumer spending, receives only half the standard multiplier.

State Tax Revenue Implications

Reduced labor force participation, lower earnings and taxable income, and diminished economic output each reduce the tax revenues available to state and federal governments. The focus of this study is the cost of obesity from the perspective of states, so lost tax revenues are estimated in three components.

First, income tax revenue implications are estimated from reductions in earnings associated with several cost components: reduced employment from obesity-attributed lower labor force participation and premature mortality, reduced earnings among women with obesity, and reduced taxable income from employees paying higher insurance premiums. State income tax brackets and rates are drawn from the Tax Foundation.[37] For states with a flat income tax rate, that rate serves directly as the marginal rate. For states with progressive rate structures, the 2024 American Community Survey (ACS) household income distribution is used to calculate a population-weighted average marginal rate across brackets for each state. Population weighting is applied because the affected population is concentrated in lower-to-middle income brackets rather than distributed proportionally to income.

Second, lost sales and consumption tax revenues are estimated by assuming that taxable sales activity would have been proportionally higher by the same percentage as the GDP shortfall, applied to state-level consumption and sales tax baselines. Third, lost business and corporate tax revenues are estimated using the same GDP-proportionality assumption applied to corporate tax revenue baselines. State tax revenue baselines are drawn from the Federal Reserve Bank of St. Louis (FRED) and state closeout reports.[38]

Estimating Medical Cost Savings from Obesity Treatment

State-level estimates of the medical cost implications of obesity treatment can inform coverage and investment decisions. To estimate the potential health and economic consequences of treating obesity in the United States, this analysis used the

Disease Prevention & Treatment Microsimulation Model (DPTMM),[39–44] a Markov-based microsimulation model developed to project clinical outcomes, direct medical expenditures, and indirect economic implications for treating populations affected by or at risk for chronic disease. The model and its application to obesity treatment has been described in detail in peer-reviewed publications, including Chen et al. (2026).[45] Here we provide a high-level summary of the modeling approach and scenario assumptions used for state obesity treatment modeling.

Population modeled. The analysis covers all adults 18–64 years of age with obesity (BMI ≥ 30) in the United States, with results reported at the state level. The modeled population of approximately 107.6 million[45] U.S. adults with obesity spans commercial insurance, Medicare, Medicaid, and uninsured populations. Because no single data source contains all variables required for microsimulation, the population file was constructed by integrating multiple state and nationally representative datasets. The 2024 American Community Survey (ACS) provides the demographic foundation, including age, sex, race/ethnicity, insurance type, employment status, and geographic location, for a representative sample of adults in each state. Each ACS record was then matched to a Behavioral Risk Factor Surveillance System (BRFSS) respondent from the same state via exact stratum matching on sex, age group, race/ethnicity, insurance type, and household income category, using 2023 and 2024 BRFSS data. BRFSS was used at this stage rather than NHANES because its sample design supports state-level prevalence estimates. This step added self-reported health conditions and other risk factors including BMI and smoking status. In the second stage, biomarkers unavailable in BRFSS, including lipid levels, hemoglobin A1c, and systolic blood pressure, were imputed via propensity score matching to NHANES respondents (2015–2023), with all biomarker values assigned from a single matched donor to preserve empirical correlations among biomarkers. BMI distributions were recalibrated to align with clinically measured NHANES prevalence estimates to correct for the systematic underreporting of obesity in self-reported survey data. Each merged record includes demographics, biometric measurements, smoking status, and disease history, giving the model a demographically and clinically representative population of adults with obesity in each state. Population counts were then scaled to 2025 state-level estimates.

How the DPTMM works. The DPTMM is a stochastic microsimulation model that projects health and economic outcomes at the individual level in annual cycles, with each person's trajectory determined by their demographic, clinical, and behavioral risk profile.

The model uses a multipathway causal structure. Changes in BMI affect metabolic parameters, including blood pressure, blood glucose, and lipid levels, which in turn influence the probability of disease onset. This architecture allows the model to capture the interconnected pathways through which weight change affects health, while avoiding double-counting of overlapping risk factors. Transition probabilities are derived from major clinical trials, epidemiological cohort studies, and meta-analyses, with preference given to U.S.-based populations and longer follow-up periods.

The model projects nearly 40 clinical outcomes across metabolic disorders (including type 2 diabetes and hypertension), cardiovascular disease (including ischemic heart disease, congestive heart failure, stroke, and myocardial infarction), chronic kidney disease, 13 obesity-related cancers, respiratory conditions, mental health disorders, and musculoskeletal conditions.[44] Medical cost projections are based on Medical Expenditure Panel Survey (MEPS) data specific to a person's insurance type, adjusted to 2025 dollars, and further adjusted by state using a state-level health cost index reflecting differences in 2025 medical prices.[15]

Treatment approaches and the modeled weight loss scenarios. Obesity is a chronic disease influenced by a combination of biological, genetic, environmental, economic, and social factors. Treatment is individualized and typically involves some combination of lifestyle intervention, behavioral support, prescription medication, and surgery, selected through shared decision-making between the patient and their provider. The five hypothetical weight loss scenarios modeled in this analysis, sustained reductions of 5%, 10%, 15%, 20%, and 25% from baseline body weight, span the range of average outcomes observed across available treatment modalities in the clinical literature (though for patients with Class III obesity even higher average weight loss has been observed).

- ***Lifestyle and behavioral interventions*** form the foundation of obesity treatment. Intensive lifestyle modification programs have been associated with average initial weight loss of up to 8% of body weight, though partial regain over subsequent years means sustained loss typically settles around 5% over a multi-year timeframe.[46,47] The Diabetes Prevention Program is a well-established example of a cost-effective intervention achieving meaningful weight management.[48] The U.S. Preventive Services Task Force recommends that all adults with obesity be offered intensive multicomponent behavioral interventions.[49]

- ***Prescription obesity management medications***, used under clinical supervision and in combination with lifestyle interventions, have been associated with weight loss 3% to 12% greater than lifestyle intervention alone.[50] More recently approved medications, including GLP-1 and GIP/GLP-1 receptor agonists such as semaglutide and tirzepatide, have demonstrated average weight loss of approximately 15% to 20% in clinical trials under conditions of continued treatment.[51–54] Investigational medications such as retatrutide, a triple hormone receptor agonist, achieved approximately 28% average weight loss at 80 weeks in the Phase 3 TRIUMPH-1 trial, with up to 30% weight loss observed in a 104-week extension among participants with severe obesity (BMI ≥ 35).[55]

- ***Metabolic and bariatric surgery*** may be considered for adults with obesity who have not achieved sufficient weight loss through other treatments, or who meet established surgical criteria.[56] Different surgical procedures have been associated with average long-term weight loss of approximately 23%–25% or more.[57,58] Surgery is a major procedure that requires lifelong follow-up care and carries procedural risks; outcomes vary across individuals and procedure types. The upper end of the modeled scenarios (20%–25%) is consistent with outcomes in the range associated with surgical treatment.

These scenarios are not designed to represent specific treatment programs or predict outcomes for individual interventions. Rather, they illustrate the potential medical cost implications of sustained weight reduction across a clinically plausible range, allowing the results to be interpreted in the context of the treatment options available in practice.

Modeling approach. Two scenario types are compared. The usual care scenario models annual BMI trajectories following natural aging patterns derived from public survey data and published references. The counterfactual scenarios model achieving and sustaining body weight reductions of 5%, 10%, 15%, 20%, and 25% from baseline, with the reduction applied in year one and maintained through year ten. Differences in projected disease incidence and associated medical costs between the usual care and counterfactual scenarios produce estimates of the potential health and economic effects of sustained weight reduction.

Interpreting the savings estimates. The medical cost savings produced by the DPTMM reflect reductions in disease incidence and associated treatment costs. They do not include the costs of achieving the modeled weight reduction, which vary considerably by treatment type. Savings estimates represent the gross medical cost reduction that would result if the specified weight loss were achieved and sustained across the entire U.S. adult population with obesity. In practice, weight loss is often not maintained indefinitely and individual outcomes vary. Under higher weight loss scenarios, adults who require only modest reduction to fall below the obesity threshold have smaller projected clinical and economic impacts than adults with higher baseline BMI.

For each state, the DPTMM produces year-by-year cumulative medical cost savings per person with obesity across the five weight loss scenarios, reported separately for the general adult obesity population. Per-person figures are multiplied by state-level population estimates of adults with obesity to produce state-level aggregate savings, which are then summed to national totals.

Findings

Summary of National Findings

Obesity and overweight affect the U.S. economy in ways that can be measured from two complementary perspectives, both shown in Exhibit A- 1. The first perspective, GDP shortfall, estimates how much total economic output falls short of what it would have been without overweight and obesity. It captures reduced labor force participation, premature mortality, absenteeism-related productivity loss, and lower earnings (a proxy for reduced productivity among those who remain employed), then applies an economic multiplier to reflect downstream spending effects of lower household and business income. Nationally, this shortfall is estimated at $495.3 billion, or 1.6% of U.S. GDP.

The second perspective, total current-year cost, tallies the direct and indirect costs that overweight and obesity impose on identifiable payers in a given year: employers (healthcare, absenteeism, disability, and workers' compensation), households (higher out-of-pocket medical costs, insurance premiums, and lost earnings), state and federal Medicaid programs, and federal Medicare. Unlike the GDP shortfall estimate, this measure does not apply an economic multiplier, because it accounts for actual expenditures rather than foregone output. Nationally, the total current-year cost is estimated at $496.5 billion, also approximately 1.6% of GDP.

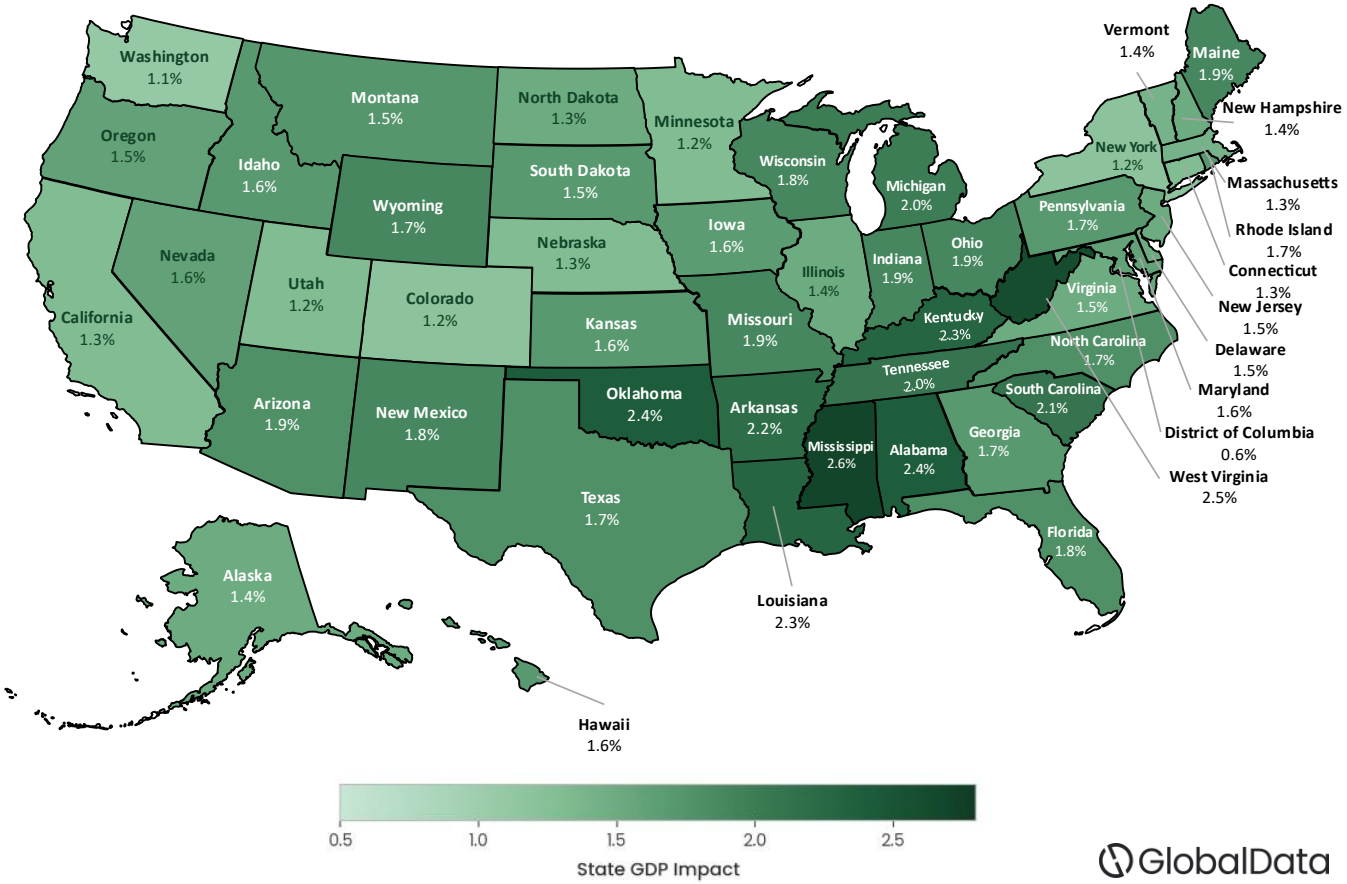
Although these two figures happen to be similar at the national level, they measure fundamentally different things and should not be interpreted as equivalent or redundant. The similarity is largely coincidental: the GDP shortfall estimate excludes healthcare spending but includes a multiplier effect; the total cost estimate includes healthcare spending (approximately $232.5 billion nationally, spanning employer-sponsored insurance, household out-of-pocket costs, Medicaid, and Medicare) but excludes the multiplier. At the state level, the two figures diverge more visibly, reflecting differences in Medicaid and Medicare enrollment, healthcare cost levels, and local economic composition.

The different treatment of healthcare spending reflects how medical expenditure functions economically. Higher obesity-related healthcare spending represents a reallocation of resources within the economy rather than a net reduction in output: the dollars spent (whether through employer premiums, employee cost-sharing, or government program outlays) flow as revenue to hospitals, physicians, pharmacies, insurers, and other healthcare sector participants. The GDP shortfall estimate is designed to capture foregone economic activity (production and income that would have existed in the absence of overweight and obesity but does not), and elevated healthcare spending does not reduce GDP in the same way that a person leaving the workforce or dying prematurely does.

The reallocation nonetheless carries real costs to the payers bearing it. Employers paying higher premiums have less capital available for wages, investment, and expansion. Workers face higher out-of-pocket costs and take home less pay, reducing household consumption. Government programs directing more spending toward obesity-related care have fewer resources for other purposes. The total current-year cost estimate captures these payer-side costs directly. To the extent that elevated health costs also suppress employer investment, household consumption, or productive public spending, they exert a modest additional drag on GDP not captured in the shortfall estimate, suggesting the GDP figure is if anything conservative as a measure of the full economic burden.

State-level GDP shortfalls range from 0.6% in the District of Columbia to 2.6% in Mississippi. Southern and Appalachian states carry the highest relative burdens: Mississippi, West Virginia, Alabama, Oklahoma, Kentucky, Louisiana, South Carolina, and Arkansas each exceed 2.0% of state output. States at the lower end include Washington (1.1%); Colorado, Minnesota, New York, and Utah (1.2% each); and California, Connecticut, Massachusetts, Nebraska, and North Dakota (1.3% each), reflecting lower prevalence rates and, in several cases, higher GDP-per-worker economies. Total current-year costs follow broadly similar patterns, though the two figures diverge in states where Medicaid enrollment or healthcare cost levels differ meaningfully from the national average.

Exhibit 2. State Reduction in GDP Potential Attributed to Overweight and Obesity



Medical Cost Implications

Obesity and overweight are associated with $232.5 billion in total national medical costs, encompassing higher Medicaid and Medicare expenditures, increased healthcare costs to employers, and higher out-of-pocket and premium costs to households (Exhibit A- 2). These higher costs include spending for hospital inpatient and emergency care, ambulatory visits, medication costs (excluding obesity treatments), and other miscellaneous equipment and supply costs.

From the state perspective, reflecting state Medicaid costs, employer costs, and household costs, the total is $126.1 billion. The remaining $106.4 billion reflects federal costs, comprising $34.8 billion in federal Medicaid spending and $71.6 billion in Medicare expenditures attributable to obesity and overweight. Total national healthcare spending was estimated at approximately $5.5 trillion in 2025[b]; the $232.5 billion in overweight- and obesity-attributed costs represents approximately 4.2% of that total. Healthcare costs to federal employer programs including the Federal Employees Health Benefits

[b] The $5.5 trillion estimate is based on a 2024 estimate of $5.3 trillion[59] escalated for population growth and medical inflation.

Program, TRICARE, the Veterans Health Administration, and the Indian Health Service are excluded from this estimate; their inclusion would increase the total medical cost burden documented here.

Employer costs are the largest single component of the state-perspective total, at $69.7 billion nationally. Higher household medical costs, including out-of-pocket expenditures and the employee share of insurance premiums, total $31.5 billion. State Medicaid costs attributable to obesity and overweight total $24.9 billion; combined with the federal Medicaid share of $34.8 billion, total Medicaid costs attributable to obesity and overweight are approximately $59.6 billion nationally. On the federal side, Medicare costs of $71.6 billion are the larger component, reflecting the older age profile of Medicare beneficiaries and the cumulative health consequences of long-term obesity.

As expected, total medical costs by state largely track state population size. California ($24.8 billion), Texas ($18.2 billion), New York ($15.3 billion), and Florida ($13.4 billion) account for the largest absolute costs, together representing approximately 31% of the national total. The smallest absolute burdens are in Wyoming ($380 million), Vermont ($460 million), the District of Columbia ($470 million), and North Dakota ($590 million). A notable pattern emerges across states in the Medicaid figures: states with lower per-capita incomes qualify for higher federal matching rates (FMAP), meaning the federal government covers a larger share of total Medicaid costs. In states such as Mississippi, West Virginia, New Mexico, and Kentucky, the federal Medicaid share attributable to obesity and overweight approaches or exceeds twice the state share, compared to a roughly 1.4-to-1 federal-to-state ratio in higher-income states.

Indirect Economic Implications

Overweight and obesity reduce U.S. economic output by $495.3 billion through reduced productivity and foregone economic growth. Reduced productivity comes from multiple channels: unemployment, absenteeism, disability, lower productivity among employed individuals, and premature mortality. Economic losses associated with disability are measured as the cost of disability and workers' compensation payments, while lower productivity among employed individuals is proxied by reduced earnings. Reduced earnings were observed only among women with obesity; no negative earnings effects were found for people with overweight or for men relative to demographically similar individuals with healthy weight. Methodological refinement, rather than a genuine shift in labor-market conditions over so brief an interval, most plausibly accounts for the revised, smaller estimate. This refinement reflects the incorporation of more recent (2019–2024) survey data and the re-estimation of regression models, though evolving labor-market conditions and shifting societal attitudes toward obesity may also have contributed. Exhibit A- 3 presents these components at the national and state level.

Foregone economic growth is the largest single component at $231.0 billion, reflecting the multiplier effect applied to the combined upstream income losses. Absenteeism is the largest direct productivity cost at $109.2 billion, followed by lost earnings among employed women with obesity ($42.9 billion), premature mortality ($51.1 billion), disability payments ($41.2 billion), unemployment ($12.8 billion), and workers' compensation ($7.1 billion).

As with healthcare costs, total indirect costs by state largely reflect population size. California ($56.9 billion), Texas ($50.8 billion), Florida ($33.2 billion), and New York ($29.0 billion) account for the largest absolute totals. The close proximity of the California and Texas figures, despite California having a substantially larger economy and lower obesity prevalence, reflects Texas's higher obesity rates and larger working-age population share. At the lower end, Vermont ($0.69 billion), Wyoming ($0.89 billion), and the District of Columbia ($1.07 billion) report the smallest totals and Puerto Rico’s total indirect cost is estimated at $2.39 billion.

State variation in the composition of indirect costs is also notable. The multiplier component, representing foregone economic growth, varies considerably as a share of each state's total indirect cost, ranging from roughly 42% in Maryland and Virginia to approximately 56% in Delaware and 61% in Wyoming. This variation reflects differences in state economic multipliers, which are driven by the composition of local economies and the degree to which reduced household and business income circulates within the state versus leaking to out-of-state purchases.

Workforce and Labor Market Impacts

Reduced Labor Force Participation

Obesity is associated with reduced labor force participation among working-age women. Analysis of the National Health Interview Survey found that women with obesity had a 3-percentage point lower odds of employment relative to women with healthy weight; there is no detrimental employment effect observed for men. As shown in Exhibit A- 4, nationally an estimated 229,500 women are not in the workforce in a given year due to this effect. State estimates range from fewer than 500 in smaller states such as Wyoming and North Dakota to more than 21,000 in California and Texas, broadly tracking state population size.

According to an analysis by the American Security Project, an estimated 52,000 applicants were disqualified from active duty in fiscal year 2023 on the basis of weight alone — exceeding the services' 41,000-person recruitment shortfall in that year — and obesity remains the leading medical factor in recruitment ineligibility.[60,61] Separately, the Centers for Disease Control and Prevention has estimated that only two in five young adults are both weight-eligible and adequately active to qualify for military service.[62] These figures illustrate, in a single concrete setting with documented eligibility thresholds, the workforce-availability constraints described more broadly in this section.

Premature Mortality

Obesity is associated with premature death across a range of underlying conditions, removing individuals from the workforce before they would otherwise have exited. The workforce impact of premature mortality is estimated by applying demographic-specific labor force participation rates to adults who died prematurely in the prior decade and who would otherwise remain in the workforce in the reference year. Nationally, an estimated 671,100 workers are absent from the 2025 workforce as a result of obesity-attributable premature deaths occurring over the preceding ten years, representing approximately 598,300 deaths annually (Exhibit A- 4). Of these missing workers, approximately 464,600 (69%) are men and approximately 206,400 are women, reflecting men's higher labor force participation rates at the ages most affected by premature mortality. Workforce losses due to premature mortality are roughly three times the labor force participation effect, comprising approximately three-quarters of total workforce losses attributed to obesity.

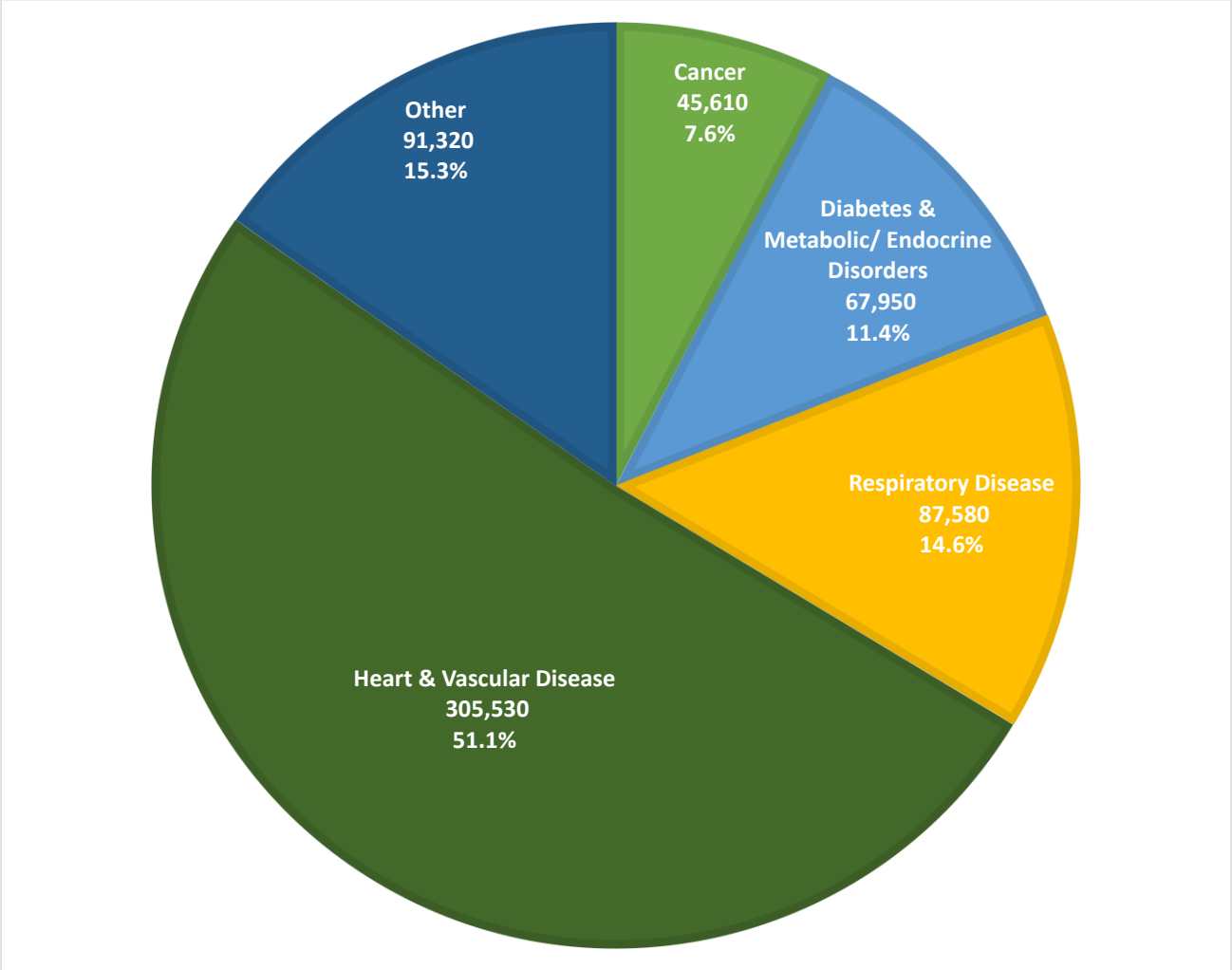
Obesity-attributable deaths are concentrated at older ages. Approximately 61% of deaths occurred among adults aged 75 and older, and an additional 23% among adults aged 65 to 74; fewer than 2% occurred before age 50. Deaths among women are more concentrated at the oldest ages, with 69% occurring at age 75 or older, compared with 55% for men. Because the workforce impact estimate applies labor force participation rates to decedents, deaths at ages above typical workforce participation contribute less to the missing-worker count than the overall death totals would suggest.

At the state level, workforce losses due to premature mortality are largest in California (79,300), Texas (78,700), Florida (53,800), and New York (36,700), consistent with these states' population size. Smaller states such as Wyoming, North Dakota, and Alaska each record fewer than 500 workers absent due to premature mortality.

Exhibit 3 and Exhibit A- 5 present the distribution of underlying causes of obesity-attributable premature mortality by state. Heart and vascular disease is the leading underlying cause in every state, accounting for approximately half of all deaths nationally (51.1%), ranging from 46.5% in Kentucky to 58.2% in Oklahoma. Respiratory disease is the second most common specific cause nationally (14.6%) and is elevated in Kentucky (20.8%), West Virginia (20.2%), and Colorado (19.0%). Diabetes and metabolic or endocrine disorders are the third most common specific cause nationally (11.4%), with notable variation across states, ranging from 15.6% in California to 6.2% in Connecticut. Cancer is the fourth most common specific cause nationally (7.6%), with the highest shares in Minnesota (10.1%), followed by Colorado and Washington (9.9% each). The

remaining deaths, classified as other causes, account for 15.3% nationally. State variation in the underlying cause of death may reflect sample size limitations, particularly for states with smaller populations.

Exhibit 3. Underlying Cause of Death for Obesity-attributed Premature Mortality



Source: GlobalData analysis of CDC Wonder Mortality data.

Government Fiscal Impact

Overweight and obesity generate measurable costs for both state and federal governments through four channels: reductions in tax revenue collections attributable to lower economic activity, higher Medicaid expenditures, higher Medicare expenditures, and increased healthcare costs for state and local government employees. As noted previously, this does not provide a complete national government fiscal picture as several federal components are omitted (Exhibit 1). The focus of this study is the implications for states. While this report includes estimates of federal costs associated with higher Medicaid and Medicare expenditures, the analysis excludes any impact on federal tax collections, higher healthcare costs for federal employees, and federal public assistance programs other than Medicaid or Medicare. Nationally, the state

budget impact from the first, second, and fourth channels totals an estimated $52.7 billion annually, with federal Medicare and Medicaid costs presented separately in Exhibit A- 6.

Reduced tax revenues account for $16.9 billion of that total, reflecting the effect of lower labor force participation, reduced earnings, and diminished economic output on state income, sales, and other tax collections. Higher Medicaid costs add $24.9 billion, representing the state share of Medicaid spending attributable to obesity-related conditions. State and local government employee healthcare costs contribute the remaining $10.9 billion, reflecting the role of government as a large employer bearing a share of commercial insurance premiums.

The largest absolute state budget impacts occur in California ($7.2 billion), New York ($4.4 billion), Texas ($3.1 billion), Illinois ($2.6 billion), and Florida ($2.3 billion), consistent with their population sizes. However, the composition of costs varies across states. States with larger Medicaid programs relative to their populations, particularly those with higher enrollment following Medicaid expansion under the Affordable Care Act, tend to face greater Medicaid cost exposure as a share of total fiscal impact. States with relatively large state government workforces, such as Texas, show a higher share of costs attributable to government employee healthcare.

Combined federal Medicare and Medicaid expenditures attributable to overweight and obesity total $106.4 billion nationally. As noted above, this reflects only a portion of the full federal fiscal burden, as federal tax revenue implications, federal employee healthcare costs, and federal public assistance programs are outside the scope of this analysis (Exhibit 1).

Federal employer healthcare costs not modeled in this analysis include the Federal Employees Health Benefits Program (approximately 8.2 million enrollees across federal civilian employees, retirees, and dependents), the TRICARE program (active duty service members, military retirees, and their dependents), the Veterans Health Administration (approximately 9 million enrolled veterans, of whom an estimated 40% are living with obesity), and the Indian Health Service.[62–64] While these costs are not modeled directly here, published estimates suggest the magnitude is material: the Department of Defense incurs obesity-related healthcare costs estimated at $1.25 billion annually for active-duty service members alone, rising to approximately $1.5 billion when former service members and their families are included.[60,62] The Office of Personnel Management has attributed part of recent Federal Employees Health Benefits Program premium growth to higher prescription drug utilization, including obesity medications.

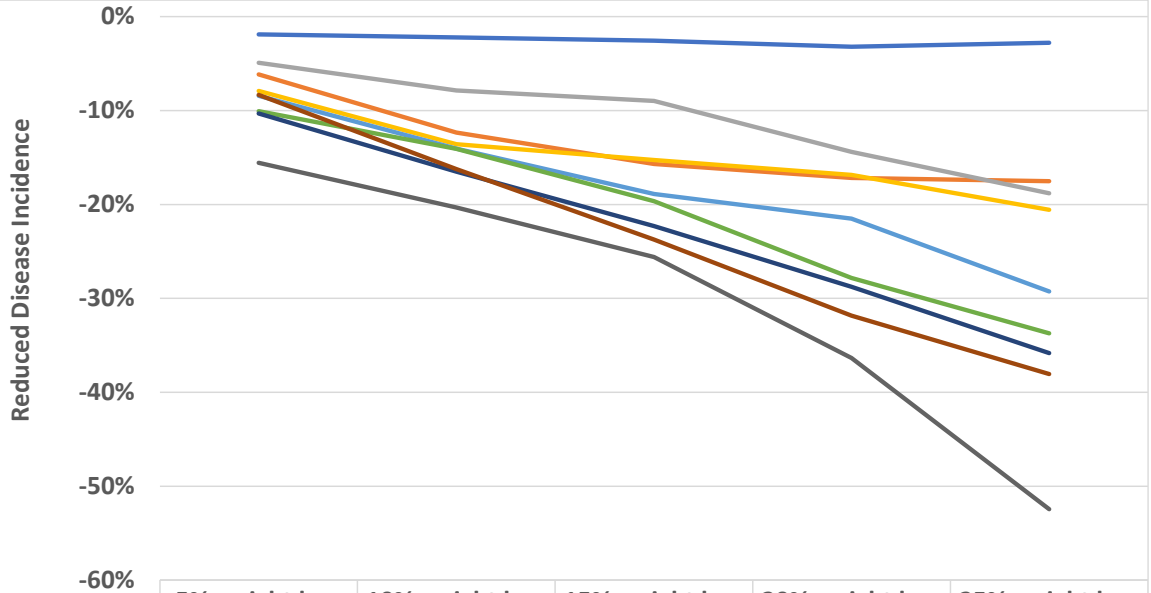
Potential Value of Treating Obesity

Meaningful health benefits are associated with sustained, even modest weight loss among adults with obesity. Over a 10-year horizon, a 5% reduction in body weight is projected to reduce the incidence of type 2 diabetes by 15.6%, heart attacks by 10.1%, congestive heart failure by 10.3%, chronic kidney disease by 8.4%, obstructive sleep apnea by 8.3%, heart disease by 7.9%, stroke by 6.2%, end-stage renal disease by 4.9%, and overall mortality by 1.9% among the population with obesity (Exhibit 4). Projected benefits increase at higher levels of sustained weight loss. Sustaining up to 25% weight loss is projected to reduce the incidence of type 2 diabetes by 52.5%, heart attacks by 33.7%, congestive heart failure by 35.8%, obstructive sleep apnea by 37.1%, chronic kidney disease by 29.3%, heart disease by 20.6%, stroke by 17.5%, end-stage renal disease by 18.8%, and overall mortality by 2.8%.

These projected clinical improvements are associated with reductions in medical expenditures. Among adults with obesity who sustain a 5% reduction in body weight, cumulative per-person medical cost savings are estimated at $180 in one year, $2,170 over five years, and $7,310 over a 10-year period (Exhibit 5). Projected savings increase with the level of sustained weight loss; adults sustaining 25% weight loss are estimated to accrue $15,860 in cumulative medical cost savings over 10 years. Modeled estimates of average savings vary by the person's insurance type, state, starting BMI, and presence of other risk factors.[45,65,66] Nationally, if all adults with obesity sustained a 5% reduction in body weight, total medical cost savings over the next decade are estimated at $661 billion (Exhibit 6). Projected national savings range from $850 billion at sustained 10% weight loss to $1.4 trillion at sustained 25% weight loss. These estimates exclude treatment costs.

These projections underscore the health and economic implications of long-term weight management, particularly for adults with higher baseline BMI. Preventing or delaying the onset of obesity-related conditions can reduce medical expenditure, hospitalizations, and the need for long-term care. Projected 10-year medical cost savings vary substantially across states, reflecting differences in the size of the population with obesity and underlying healthcare utilization patterns (Exhibit A- 7). At the 5% sustained weight loss scenario, state-level savings estimates range from $1.2 billion each in Vermont and Wyoming to $79.4 billion in Texas. At the 25% scenario, estimates range from $2.0 billion in Vermont to $176.5 billion in California.

Exhibit 4. Estimated Clinical Benefits of Sustained Weight Loss Among Adults with Obesity



	5% weight loss	10% weight loss	15% weight loss	20% weight loss	25% weight loss
All Cause Mortality	-1.9%	-2.2%	-2.6%	-3.2%	-2.8%
Stroke	-6.2%	-12.4%	-15.7%	-17.2%	-17.5%
End Stage Renal Disease	-4.9%	-7.9%	-9.0%	-14.4%	-18.8%
Heart Disease	-7.9%	-13.6%	-15.3%	-16.9%	-20.6%
Chronic Kidney Disease	-8.4%	-14.1%	-18.9%	-21.5%	-29.3%
Heart Attack	-10.1%	-14.1%	-19.7%	-27.8%	-33.7%
Congestive Heart Failure	-10.3%	-16.5%	-22.3%	-28.8%	-35.8%
Obstructive Sleep Apnea	-8.3%	-16.2%	-23.7%	-31.8%	-38.1%
Type 2 Diabetes	-15.6%	-20.3%	-25.6%	-36.3%	-52.5%

Source: GlobalData Disease Prevention & Treatment Microsimulation Model.

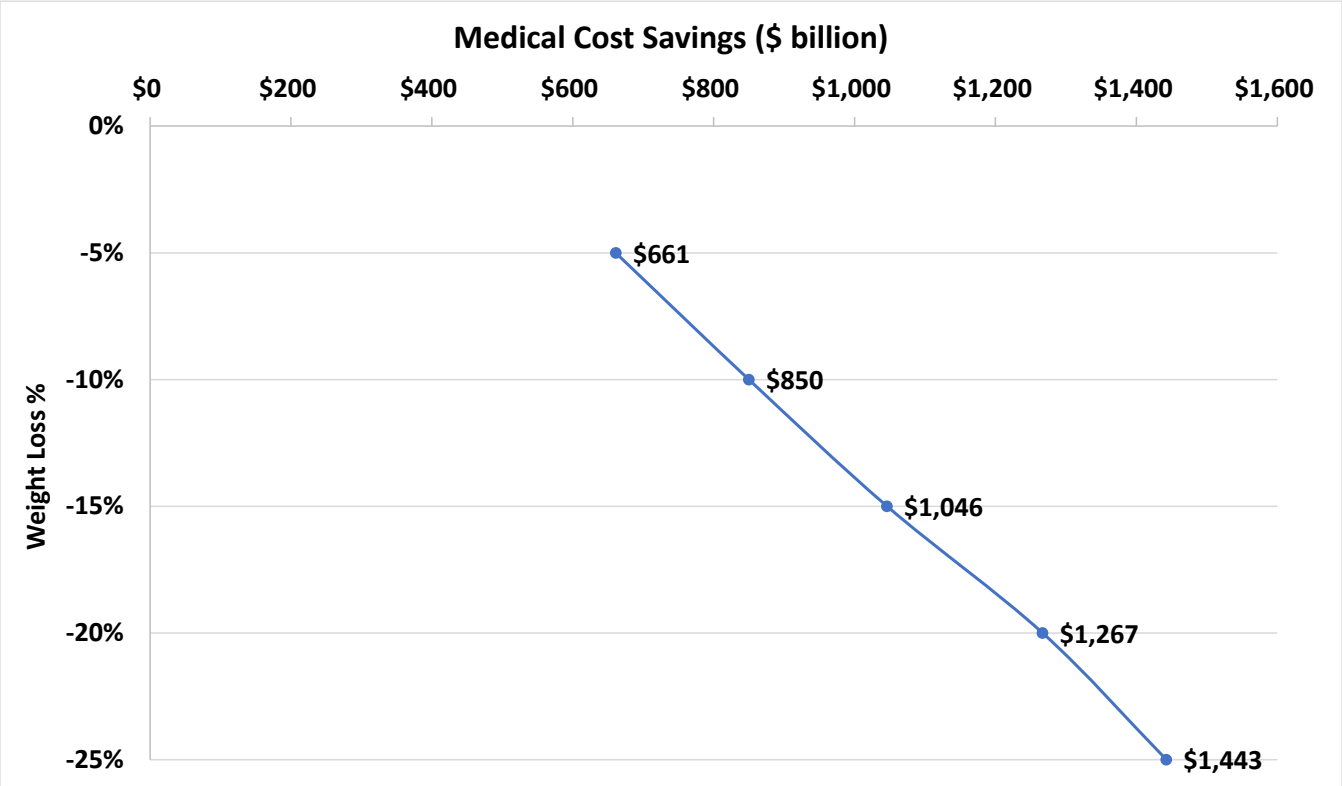
Note: Estimates reflect projected reductions in 10-year disease incidence relative to a usual care scenario among U.S. adults with obesity (BMI ≥ 30).

Exhibit 5. Estimated Cumulative Per-Person Medical Cost Savings from Sustained Weight Loss Among Adults with Obesity

Source: GlobalData Disease Prevention & Treatment Microsimulation Model.

Note: Estimates reflect average cumulative medical cost savings per person at 1, 5, and 10 years relative to a usual care scenario among U.S. adults with obesity (BMI ≥ 30). Individual savings vary by insurance type, state, baseline BMI, and presence of comorbidities. Savings estimates exclude treatment costs.

Exhibit 6. Projected Potential 10-Year Aggregate Medical Cost Savings from Sustained Weight Loss Among Adults with Obesity, United States



Source: GlobalData Disease Prevention & Treatment Microsimulation Model.

Note: Estimates reflect projected cumulative medical cost savings over 10 years if all U.S. adults with obesity achieved and sustained body weight reductions of 5%, 10%, 15%, 20%, or 25% relative to a usual care scenario. Savings estimates exclude treatment costs.

Recommendations to Improve Access to Obesity Treatment

A multitude of prominent organizations have released guidelines for the prevention and treatment of obesity, providing valuable guidance for healthcare professionals and policymakers.

- **The National Institutes of Health** (NIH) has developed guidelines for the management of overweight and obesity in adults, including recommendations for lifestyle interventions, pharmacotherapy, and bariatric surgery.[67]
- **The Centers for Disease Control and Prevention** (CDC) has developed a framework for obesity prevention and control that includes recommendations for community-based interventions and clinical management of obesity.[68]
- **The American Medical Association** (AMA), the **American College of Cardiology** (ACC), the **American Gastroenterological Association** (AGA), and the **American Association of Clinical Endocrinology** (AACE) have issued

recommendations for the prevention and treatment of obesity, including the need for weight management strategies[69–71] and insurance coverage parity for obesity treatment options.[72]

- **The American Heart Association** (AHA) has issued guidelines for the treatment of obesity in adults, including recommendations for diet, physical activity, behavioral therapy, and implementation of obesity science in clinical practice.[73,74]
- **The American Diabetes Association** (ADA) addresses obesity prevention and treatment within its broader diabetes care guidelines.[75]
- **The Obesity Association**, a division of the ADA, has published the first comprehensive obesity-specific standards of care, separate from its diabetes guidelines, covering weight stigma and bias, clinical management, and pharmacologic treatment of obesity in adults.[76,77]
- **The Obesity Society** has issued position statements recognizing obesity as a chronic disease and calling for expanded access to evidence-based treatment and continued research into its causes and management.[78] The Obesity Society is also among more than 100 professional and scientific organizations that co-signed a joint international consensus statement calling for the elimination of weight bias and stigma in healthcare, education, media, and public policy.[79]
- **The Obesity Action Coalition** has issued policy statements advocating for improved access to obesity treatment and addressing weight bias and stigma.[80]
- **Obesity Medicine Association** provides clinical resources and education for healthcare professionals committed to a comprehensive approach to obesity care.[81]
- **The American Society for Metabolic and Bariatric Surgery** (ASMBS) and the **International Federation for the Surgery of Obesity and Metabolic Disorders** (IFSO) have published guidelines for weight-loss surgery.[56]
- **The World Health Organization** has issued a guideline on the use of GLP-1 and GIP/GLP-1 receptor agonist therapies for the treatment of obesity in adults, recommending long-term pharmacotherapy be delivered alongside sustained behavioral and lifestyle support as part of comprehensive obesity care.[82]

Numerous prominent organizations have released guidelines concerning the prevention and treatment of obesity. These recommendations serve as valuable guidance for healthcare professionals and policymakers in undertaking this significant public health concern…Still, access to and utilization of obesity treatment remains limited.

Still, despite the availability of such recommendations, access to and utilization of obesity treatment remains limited.[83] The following recommendations to policymakers and to employers can increase access to modernized[c] and obesity care.

Federal Policymakers

As documented in this report, federal payers (Medicare, Medicaid) account for approximately $106.4 billion in annually attributable medical costs. Federal coverage frameworks including indication-specific pathways such as those established for cardiovascular risk reduction provide existing levers through which clinical evidence and FDA-approved indications can be reflected in payer policy.

- **Support implementation of Medicare's Bridge program and the BALANCE model**[d]: Policymakers can support implementation of Medicare's interim Bridge program, which provides short-term coverage of FDA-approved obesity

[c] Modern healthcare leverages science, technology, health capabilities, and cost-effective solutions to enhance quality, efficiency, and delivery of care.

[d] The Better Approaches to Lifestyle and Nutrition for Comprehensive Health (BALANCE) Model is a voluntary CMMI demonstration expanding beneficiary access to GLP-1 therapies for obesity treatment under Medicaid, with state participation beginning May 2026 and extension to Medicare Part D contingent on subsequent CMS implementation. The Medicare GLP-1 Bridge is a short-term CMS payment demonstration providing interim coverage of FDA-approved obesity medications for Medicare Part D beneficiaries beginning July 2026.

management medications for Medicare Part D beneficiaries beginning July 2026, as well as implementation of the longer-term BALANCE model for Medicare by 2028.

- **Promote insurance coverage for comprehensive obesity treatment for federal government employees**: Policymakers can demonstrate modern care for obesity by updating health insurance for federal government employees to cover person-centric and comprehensive obesity care, including intensive behavioral counseling, nutrition support, pharmacotherapy, and metabolic/bariatric surgery.
- **Expand access to obesity treatment in rural and high-burden communities**: Policymakers can support the establishment of designated obesity treatment centers in rural and high-burden communities to ensure residents have access to person-centric and comprehensive obesity care, with urgency in communities with the highest obesity prevalence and greatest treatment gaps.
- **Expand Medicaid and Medicare coverage for obesity treatment**: Policymakers can expand Medicaid coverage to include person-centric and comprehensive obesity care, including intensive behavioral counseling, nutrition support, pharmacotherapy, and metabolic and bariatric surgery. For Medicaid, this can build on the BALANCE model described above; for Medicare, it can build on the interim Bridge model in the near term and the longer-term BALANCE model thereafter.
- **Invest in community-based programs and education campaigns**: Policymakers can invest in community-based programs and infrastructure that serve as an adjunct to clinical obesity care, ensuring individuals have access to healthy, affordable food and safe opportunities for physical activity. Investments in efforts to reduce body size bias and stigma and to provide improved access to mental health support further advance modern obesity care. Education campaigns, including training primary care providers, can increase awareness of the causes and health consequences of obesity and promote treatment. Community health worker (CHW) programs represent a cost-effective model for providing outreach and support to address obesity in underserved populations.[84–86]

State Policymakers

As documented in this report, states collectively bear $52.7 billion in direct annual fiscal impact, with state-level GDP shortfalls ranging from 0.6% to 2.6%. Utilization management practices in state Medicaid programs and access pathways for rural and high-burden communities represent existing decision frameworks through which clinical guidelines can be operationalized.

- **Expand access to comprehensive Medicaid coverage for obesity treatment**: Policymakers can expand Medicaid coverage to include person-centric and comprehensive obesity care including intensive behavioral counseling, nutrition support, pharmacotherapy, and metabolic and bariatric surgery, building on CMMI models such as the BALANCE model described above.
- **Promote insurance coverage for comprehensive obesity treatment for state government employees**: Policymakers can demonstrate modern care for obesity by updating health insurance for state and local government employees to cover comprehensive obesity care.
- **Expand access to obesity treatment in rural and high-burden communities**: As with the federal-level recommendation above, states can support designated obesity treatment centers and community infrastructure in rural and high-burden communities within their borders.

State and Private Employers

Employer-sponsored insurance accounts for $69.7 billion in obesity-attributable medical costs, the largest single payer category in this analysis. Coverage design for comprehensive obesity treatment in state employee plans, university system

plans, and self-insured private plans interacts with both healthcare-cost-trajectory considerations and the workforce-productivity dynamics documented throughout this report.

- **Offer insurance coverage and wellness programs for obesity care at parity with other chronic diseases:** Employers can ensure their health insurance plans cover person-centric and comprehensive obesity treatments, including intensive behavioral counseling, nutrition support, pharmacotherapy, and metabolic and bariatric surgery. Wellness programs can supplement coverage by providing resources for healthy eating, physical activity, and comprehensive weight management support inclusive of all treatment options. Investments in efforts to reduce body size bias and stigma and to provide improved access to mental health support further overall modern obesity care.
- **Foster a culture of support and inclusion**: Employers can create a workplace culture that recognizes and accommodates the needs of employees with obesity through non-discriminatory policies, weight bias and stigma mitigation training, and a supportive environment that promotes healthy behaviors.
- **Encourage market changes through suppliers and vendors**: Employers can engage health insurers, pharmacy benefit managers, and healthcare vendors to improve coverage terms, reduce prior authorization barriers, and expand networks of obesity treatment providers. Particularly, large employers can negotiate plan designs that reduce or eliminate utilization management practices and improve access to clinically appropriate obesity treatment for employees.
- **Provide education and resources:** Employers can provide employees with education on the health consequences associated with obesity and the treatment options available. This can include partnering with health insurance programs to encourage weight assessments as part of annual physical and offering health screenings, health coaching, and other support services.

Policymakers and employers play an important role in improving access to appropriate care for people with obesity. Taking a comprehensive approach to treatment, spanning coverage policy, community infrastructure, workplace culture, and provider education, can reduce the healthcare costs and productivity losses documented throughout this report and impact health outcomes across the workforce and the broader population.

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Appendix: State Data Tables

Exhibit A- 1. Economic Impact of Overweight and Obesity: GDP Shortfall and Total Current-Year Cost by State, 2025

State	State GDP Shortfall ($B) *	Shortfall as % State GDP *	Total Cost ($B) †	Total Cost as % State GDP †
Alabama	$8.2	2.4%	$7.6	2.2%
Alaska	$1.1	1.4%	$1.2	1.6%
Arizona	$11.2	1.9%	$10.9	1.8%
Arkansas	$4.5	2.2%	$4.3	2.2%
California	$56.9	1.3%	$57.9	1.3%
Colorado	$6.8	1.2%	$7.3	1.2%
Commonwealth of Puerto Rico	$2.4	1.9%	$3.2	2.5%
Connecticut	$4.9	1.3%	$5.4	1.4%
Delaware	$1.7	1.5%	$1.6	1.4%
District of Columbia	$1.1	0.6%	$1.0	0.5%
Florida	$33.2	1.8%	$30.6	1.7%
Georgia	$16.4	1.7%	$15.6	1.7%
Hawaii	$2.1	1.6%	$2.1	1.7%
Idaho	$2.2	1.6%	$2.5	1.8%
Illinois	$17.6	1.4%	$19.4	1.6%
Indiana	$10.5	1.9%	$10.2	1.8%
Iowa	$4.6	1.6%	$4.6	1.6%
Kansas	$4.0	1.6%	$3.9	1.6%
Kentucky	$7.1	2.3%	$7.1	2.3%
Louisiana	$7.8	2.3%	$7.1	2.1%
Maine	$1.9	1.9%	$2.2	2.1%
Maryland	$9.5	1.6%	$10.1	1.8%
Massachusetts	$11.1	1.3%	$12.5	1.5%
Michigan	$14.6	2.0%	$14.5	2.0%
Minnesota	$6.6	1.2%	$7.7	1.4%
Mississippi	$4.3	2.6%	$4.3	2.6%
Missouri	$9.1	1.9%	$9.3	2.0%
Montana	$1.3	1.5%	$1.5	1.8%
Nebraska	$2.6	1.3%	$2.7	1.4%

State	State GDP Shortfall ($B) *	Shortfall as % State GDP *	Total Cost ($B) †	Total Cost as % State GDP †
Nevada	$4.5	1.6%	$4.0	1.4%
New Hampshire	$1.8	1.4%	$2.0	1.6%
New Jersey	$13.3	1.5%	$13.5	1.5%
New Mexico	$2.8	1.8%	$3.1	2.0%
New York	$29.0	1.2%	$31.1	1.2%
North Carolina	$15.7	1.7%	$16.6	1.8%
North Dakota	$1.1	1.3%	$1.1	1.3%
Ohio	$18.7	1.9%	$18.7	1.9%
Oklahoma	$6.6	2.4%	$6.2	2.3%
Oregon	$5.3	1.5%	$6.5	1.9%
Pennsylvania	$18.5	1.7%	$18.9	1.8%
Rhode Island	$1.4	1.7%	$1.5	1.8%
South Carolina	$8.1	2.1%	$7.8	2.0%
South Dakota	$1.2	1.5%	$1.2	1.5%
Tennessee	$12.2	2.0%	$10.5	1.8%
Texas	$50.8	1.7%	$43.1	1.5%
Utah	$3.9	1.2%	$4.0	1.2%
Vermont	$0.7	1.4%	$0.8	1.7%
Virginia	$12.3	1.5%	$13.6	1.7%
Washington	$9.9	1.1%	$11.2	1.2%
West Virginia	$2.8	2.5%	$2.8	2.6%
Wisconsin	$8.5	1.8%	$8.8	1.8%
Wyoming	$0.9	1.7%	$0.7	1.4%
United States (Total)	**$495.3**	**1.6%**	**$496.5**	**1.6%**

Source: GlobalData analysis.

Notes: * Gross domestic product shortfall reflects the estimated reduction in state economic output attributable to overweight and obesity relative to a counterfactual scenario in which overweight and obesity are absent. Includes the effects of reduced labor force participation, premature mortality, and productivity loss among those employed, with an economic multiplier applied to capture the downstream spending effects of reduced household and business income on state economic activity. Excludes healthcare costs, which represent a reallocation of spending within the economy rather than a net reduction in output (see text). † Total current-year cost reflects the direct and indirect costs attributable to overweight and obesity incurred by identifiable payers in 2025, including employer healthcare costs, absenteeism, disability and workers' compensation, household out-of-pocket medical costs and insurance premiums, state Medicaid, federal Medicaid, federal Medicare, and government employer health plans. Healthcare costs for uninsured individuals are not captured in these estimates. Does not apply an economic multiplier.

Exhibit A- 2. Medical Cost Implications ($ billions)

State	State Perspective				Federal Perspective			Total National Costs
	State Medicaid Costs *	Employer Costs †	Household Costs †	State Total	Federal Medicaid Costs *	Medicare Costs ‡	Federal Total	
Alabama	$0.19	$1.05	$0.47	$1.71	$0.51	$1.12	$1.63	$3.34
Alaska	$0.13	$0.18	$0.08	$0.39	$0.13	$0.18	$0.31	$0.70
Arizona	$0.44	$1.42	$0.64	$2.50	$0.80	$1.52	$2.32	$4.82
Arkansas	$0.18	$0.54	$0.24	$0.96	$0.45	$0.60	$1.05	$2.01
California	$3.99	$6.86	$3.10	$13.95	$3.99	$6.84	$10.83	$24.78
Colorado	$0.37	$1.22	$0.55	$2.14	$0.37	$1.03	$1.40	$3.54
Commonwealth of Puerto Rico	$0.28	$0.30	$0.13	$0.71	$0.89	$0.59	$1.48	$2.19
Connecticut	$0.39	$0.80	$0.36	$1.55	$0.39	$0.80	$1.19	$2.74
Delaware	$0.07	$0.23	$0.11	$0.41	$0.11	$0.31	$0.42	$0.83
Distr. of Columbia	$0.04	$0.15	$0.07	$0.26	$0.10	$0.11	$0.21	$0.47
Florida	$0.94	$4.36	$1.97	$7.27	$1.26	$4.88	$6.14	$13.41
Georgia	$0.43	$2.31	$1.04	$3.78	$0.83	$2.02	$2.85	$6.63
Hawaii	$0.09	$0.34	$0.15	$0.58	$0.13	$0.31	$0.44	$1.02
Idaho	$0.10	$0.43	$0.19	$0.72	$0.21	$0.44	$0.65	$1.37
Illinois	$1.24	$2.85	$1.28	$5.37	$1.31	$2.87	$4.18	$9.55
Indiana	$0.47	$1.42	$0.64	$2.53	$0.87	$1.46	$2.33	$4.86
Iowa	$0.18	$0.73	$0.33	$1.24	$0.31	$0.74	$1.05	$2.29
Kansas	$0.11	$0.66	$0.30	$1.07	$0.18	$0.63	$0.81	$1.88
Kentucky	$0.36	$0.85	$0.38	$1.59	$0.91	$0.99	$1.90	$3.49
Louisiana	$0.41	$0.81	$0.36	$1.58	$0.88	$1.01	$1.89	$3.47
Maine	$0.12	$0.32	$0.14	$0.58	$0.19	$0.42	$0.61	$1.19
Maryland	$0.51	$1.45	$0.66	$2.62	$0.51	$1.39	$1.90	$4.52
Massachusetts	$0.81	$1.89	$0.85	$3.55	$0.81	$1.95	$2.76	$6.31

State	State Perspective				Federal Perspective			Total National Costs
	State Medicaid Costs *	Employer Costs †	Household Costs †	State Total	Federal Medicaid Costs *	Medicare Costs ‡	Federal Total	
Michigan	$0.72	$1.82	$0.82	$3.36	$1.35	$2.19	$3.54	$6.90
Minnesota	$0.50	$1.17	$0.53	$2.20	$0.52	$1.30	$1.82	$4.02
Mississippi	$0.13	$0.61	$0.27	$1.01	$0.45	$0.62	$1.07	$2.08
Missouri	$0.34	$1.42	$0.64	$2.40	$0.64	$1.47	$2.11	$4.51
Montana	$0.08	$0.22	$0.10	$0.40	$0.14	$0.29	$0.43	$0.83
Nebraska	$0.11	$0.46	$0.21	$0.78	$0.15	$0.45	$0.60	$1.38
Nevada	$0.17	$0.56	$0.25	$0.98	$0.26	$0.54	$0.80	$1.78
New Hampshire	$0.09	$0.33	$0.15	$0.57	$0.09	$0.35	$0.44	$1.01
New Jersey	$0.68	$1.98	$0.89	$3.55	$0.68	$2.03	$2.71	$6.26
New Mexico	$0.20	$0.39	$0.18	$0.77	$0.50	$0.49	$0.99	$1.76
New York	$2.52	$3.90	$1.76	$8.18	$2.52	$4.58	$7.10	$15.28
North Carolina	$0.73	$2.49	$1.13	$4.35	$1.36	$2.58	$3.94	$8.29
North Dakota	$0.04	$0.21	$0.09	$0.34	$0.05	$0.20	$0.25	$0.59
Ohio	$0.86	$2.48	$1.12	$4.46	$1.56	$2.85	$4.41	$8.87
Oklahoma	$0.32	$0.81	$0.36	$1.49	$0.65	$0.82	$1.47	$2.96
Oregon	$0.42	$0.98	$0.44	$1.84	$0.60	$1.11	$1.71	$3.55
Pennsylvania	$0.98	$2.50	$1.13	$4.61	$1.21	$3.08	$4.29	$8.90
Rhode Island	$0.09	$0.23	$0.10	$0.42	$0.11	$0.22	$0.33	$0.75
South Carolina	$0.27	$1.10	$0.50	$1.87	$0.62	$1.22	$1.84	$3.71
South Dakota	$0.06	$0.23	$0.10	$0.39	$0.06	$0.23	$0.29	$0.68
Tennessee	$0.33	$1.48	$0.67	$2.48	$0.61	$1.31	$1.92	$4.40
Texas	$1.23	$6.87	$3.10	$11.20	$1.85	$5.14	$6.99	$18.19
Utah	$0.10	$0.72	$0.33	$1.15	$0.18	$0.47	$0.65	$1.80
Vermont	$0.05	$0.13	$0.06	$0.24	$0.06	$0.16	$0.22	$0.46

State	State Perspective				Federal Perspective			Total National Costs
	State Medicaid Costs *	Employer Costs †	Household Costs †	State Total	Federal Medicaid Costs *	Medicare Costs ‡	Federal Total	
Virginia	$0.78	$1.95	$0.88	$3.61	$0.82	$1.98	$2.80	$6.41
Washington	$0.71	$1.72	$0.78	$3.21	$0.71	$1.74	$2.45	$5.66
West Virginia	$0.13	$0.37	$0.17	$0.67	$0.35	$0.48	$0.83	$1.50
Wisconsin	$0.35	$1.33	$0.60	$2.28	$0.54	$1.42	$1.96	$4.24
Wyoming	$0.03	$0.13	$0.06	$0.22	$0.03	$0.13	$0.16	$0.38
United States (Total)	**$24.9**	**$69.7**	**$31.5**	**$126.1**	**$34.8**	**$71.6**	**$106.4**	**$232.5**

Source: GlobalData analysis.

Notes: State numbers might not sum to national totals due to rounding. * Total Medicaid costs attributable to overweight and obesity are apportioned between state and federal shares using each state's Federal Medical Assistance Percentage (FMAP), which varies based on state per-capita income. † Costs are for employees and covered dependents under age 65, apportioned between employers and households based on estimates of the employer share of insurance premiums and the employee share of premiums and out-of-pocket expenditures. Medical costs for the uninsured are not captured in household estimates. ‡ Comprises total Medicare expenditures attributable to overweight and obesity, encompassing both government outlays and beneficiary cost-sharing in the form of premiums and out-of-pocket expenditures.

Exhibit A- 3. Indirect Economic Implications of Obesity ($ billions)

State	Unemployment	Absenteeism	Disability	Workers' Comp	Lost Earnings	Early Mortality	Foregone Economic Growth	Total
Alabama	$0.21	$1.54	$0.58	$0.10	$0.70	$1.15	$3.91	$8.19
Alaska	$0.03	$0.27	$0.10	$0.02	$0.09	$0.02	$0.55	$1.08
Arizona	$0.30	$2.68	$1.01	$0.17	$1.00	$0.92	$5.10	$11.18
Arkansas	$0.09	$0.97	$0.37	$0.06	$0.31	$0.49	$2.19	$4.48
California	$1.36	$14.49	$5.48	$0.94	$4.46	$6.40	$23.74	$56.87
Colorado	$0.22	$1.58	$0.60	$0.10	$0.78	$0.51	$3.01	$6.80
Commonwealth of Puerto Rico	$0.03	$0.46	$0.17	$0.03	$0.09	$0.02	$1.59	$2.39
Connecticut	$0.15	$1.16	$0.44	$0.08	$0.50	$0.32	$2.22	$4.87
Delaware	$0.05	$0.35	$0.13	$0.02	$0.17	$0.05	$0.97	$1.74
District of Columbia	$0.04	$0.23	$0.09	$0.02	$0.14	$0.04	$0.51	$1.07
Florida	$0.77	$6.93	$2.62	$0.45	$2.48	$3.97	$15.97	$33.19
Georgia	$0.48	$3.28	$1.24	$0.21	$1.58	$2.16	$7.42	$16.37
Hawaii	$0.04	$0.60	$0.23	$0.04	$0.13	$0.08	$0.94	$2.06
Idaho	$0.06	$0.59	$0.22	$0.04	$0.20	$0.06	$1.06	$2.23
Illinois	$0.54	$3.77	$1.43	$0.25	$1.82	$2.08	$7.73	$17.62
Indiana	$0.27	$2.15	$0.81	$0.14	$0.93	$1.00	$5.15	$10.45
Iowa	$0.13	$1.00	$0.38	$0.07	$0.46	$0.30	$2.28	$4.62
Kansas	$0.12	$0.85	$0.32	$0.06	$0.40	$0.28	$1.99	$4.02
Kentucky	$0.15	$1.51	$0.57	$0.10	$0.52	$0.77	$3.53	$7.15
Louisiana	$0.19	$1.46	$0.55	$0.10	$0.62	$0.68	$4.17	$7.77
Maine	$0.05	$0.48	$0.18	$0.03	$0.18	$0.11	$0.91	$1.94
Maryland	$0.32	$2.13	$0.81	$0.14	$1.03	$1.11	$3.93	$9.47
Massachusetts	$0.30	$2.79	$1.06	$0.18	$1.00	$0.88	$4.87	$11.08
Michigan	$0.37	$3.00	$1.14	$0.20	$1.21	$1.71	$6.95	$14.58
Minnesota	$0.21	$1.60	$0.61	$0.10	$0.70	$0.44	$2.96	$6.62
Mississippi	$0.10	$0.91	$0.34	$0.06	$0.34	$0.42	$2.15	$4.32
Missouri	$0.27	$1.84	$0.70	$0.12	$0.95	$0.97	$4.20	$9.05
Montana	$0.04	$0.30	$0.11	$0.02	$0.12	$0.06	$0.63	$1.28
Nebraska	$0.09	$0.60	$0.23	$0.04	$0.29	$0.11	$1.20	$2.56

State	Unemployment	Absenteeism	Disability	Workers' Comp	Lost Earnings	Early Mortality	Foregone Economic Growth	Total
Nevada	$0.12	$0.96	$0.36	$0.06	$0.38	$0.38	$2.20	$4.46
New Hampshire	$0.05	$0.45	$0.17	$0.03	$0.18	$0.09	$0.86	$1.83
New Jersey	$0.38	$2.90	$1.10	$0.19	$1.20	$1.51	$6.00	$13.28
New Mexico	$0.07	$0.60	$0.23	$0.04	$0.24	$0.16	$1.45	$2.79
New York	$0.69	$6.92	$2.62	$0.45	$2.32	$2.87	$13.15	$29.02
North Carolina	$0.41	$3.25	$1.23	$0.21	$1.37	$1.87	$7.35	$15.69
North Dakota	$0.03	$0.23	$0.09	$0.02	$0.10	$0.02	$0.60	$1.09
Ohio	$0.48	$3.80	$1.44	$0.25	$1.62	$2.20	$8.91	$18.70
Oklahoma	$0.16	$1.25	$0.47	$0.08	$0.53	$0.81	$3.34	$6.64
Oregon	$0.14	$1.39	$0.53	$0.09	$0.46	$0.32	$2.40	$5.33
Pennsylvania	$0.51	$3.96	$1.50	$0.26	$1.75	$2.07	$8.45	$18.50
Rhode Island	$0.05	$0.36	$0.14	$0.02	$0.16	$0.05	$0.63	$1.41
South Carolina	$0.23	$1.61	$0.61	$0.10	$0.77	$0.81	$3.92	$8.05
South Dakota	$0.03	$0.26	$0.10	$0.02	$0.11	$0.04	$0.66	$1.22
Tennessee	$0.29	$2.32	$0.88	$0.15	$1.03	$1.45	$6.05	$12.17
Texas	$1.11	$9.75	$3.69	$0.63	$3.70	$6.05	$25.91	$50.84
Utah	$0.12	$1.02	$0.39	$0.07	$0.41	$0.18	$1.72	$3.91
Vermont	$0.02	$0.18	$0.07	$0.01	$0.07	$0.03	$0.31	$0.69
Virginia	$0.36	$2.81	$1.06	$0.18	$1.20	$1.56	$5.09	$12.26
Washington	$0.28	$2.56	$0.97	$0.17	$0.94	$0.68	$4.30	$9.90
West Virginia	$0.06	$0.59	$0.22	$0.04	$0.21	$0.21	$1.44	$2.77
Wisconsin	$0.25	$1.96	$0.74	$0.13	$0.87	$0.61	$3.96	$8.52
Wyoming	$0.02	$0.17	$0.07	$0.01	$0.07	$0.01	$0.54	$0.89
United States (Total)	**$12.8**	**$109.2**	**$41.2**	**$7.1**	**$42.9**	**$51.1**	**$231.0**	**$495.3**

Source: GlobalData analysis. Note: State numbers might not sum to national totals due to rounding.

Exhibit A- 4. Workforce and Mortality Impact by State

State	Total Workers Missing	Missing Due to Reduced LFP	Missing Due to Premature Mortality	Annual Premature Deaths
Alabama	18,900	4,200	14,700	12,600
Alaska	600	400	200	200
Arizona	17,600	5,300	12,300	13,500
Arkansas	9,500	2,100	7,400	7,100
California	100,300	21,000	79,300	62,800
Colorado	9,400	3,400	6,000	6,800
Commonwealth of Puerto Rico	1,500	1,000	500	800
Connecticut	5,800	2,200	3,600	4,600
Delaware	1,600	900	700	1,000
District of Columbia	800	400	400	200
Florida	68,800	15,000	53,800	48,800
Georgia	39,200	9,100	30,100	21,100
Hawaii	1,900	800	1,100	1,200
Idaho	2,200	1,300	900	1,900
Illinois	35,100	8,900	26,200	23,000
Indiana	20,700	5,500	15,200	14,100
Iowa	6,800	2,500	4,300	5,400
Kansas	5,700	2,000	3,700	4,600
Kentucky	15,100	3,600	11,500	10,200
Louisiana	15,900	4,300	11,600	10,000
Maine	2,500	1,000	1,500	2,100
Maryland	16,500	4,900	11,600	9,400
Massachusetts	12,900	4,000	8,900	9,800
Michigan	29,800	7,000	22,800	22,300
Minnesota	9,100	3,500	5,600	7,400
Mississippi	11,200	2,700	8,500	7,100
Missouri	18,700	5,100	13,600	13,200
Montana	1,600	700	900	1,200
Nebraska	2,700	1,300	1,400	2,300
Nevada	7,500	2,300	5,200	5,300
New Hampshire	1,800	800	1,000	1,500
New Jersey	21,000	5,300	15,700	14,600
New Mexico	4,100	1,600	2,500	3,100

State	Total Workers Missing	Missing Due to Reduced LFP	Missing Due to Premature Mortality	Annual Premature Deaths
New York	48,100	11,400	36,700	33,100
North Carolina	34,700	7,900	26,800	21,100
North Dakota	700	500	200	500
Ohio	38,800	8,800	30,000	26,800
Oklahoma	14,500	3,300	11,200	9,700
Oregon	6,800	2,500	4,300	6,100
Pennsylvania	36,100	8,900	27,200	27,400
Rhode Island	1,300	700	600	1,000
South Carolina	16,000	4,500	11,500	10,900
South Dakota	1,100	600	500	700
Tennessee	26,300	5,800	20,500	16,500
Texas	99,800	21,100	78,700	51,400
Utah	4,200	2,300	1,900	3,100
Vermont	800	400	400	500
Virginia	23,500	6,000	17,500	15,300
Washington	13,400	4,700	8,700	10,500
West Virginia	4,900	1,300	3,600	4,200
Wisconsin	12,200	4,300	7,900	9,900
Wyoming	600	400	200	400
United States (Total)	**900,600**	**229,500**	**671,100**	**598,300**

Source: GlobalData analysis. Workers missing due to reduced LFP reflects adults living with obesity who are not employed due to its impact on labor force participation. Workers missing due to premature mortality reflects adults who died prematurely in the prior 10 years who would otherwise be in the workforce. Women's earnings reduction applies to women with obesity vs. women with healthy weight. State and demographic subtotals might not sum to national totals due to rounding.

Exhibit A- 5. Underlying Cause of Death for Obesity-attributed Premature Mortality

State	Cancer	Diabetes & Metabolic /Endocrine Disorders	Heart & Vascular Disease	Respiratory Disease	Other
Alabama	5.9%	6.6%	54.0%	16.1%	17.4%
Alaska	7.7%	10.5%	50.6%	16.3%	14.9%
Arizona	7.8%	13.6%	48.7%	15.0%	14.9%
Arkansas	5.7%	9.9%	50.5%	18.6%	15.3%
California	7.8%	15.6%	50.3%	11.6%	14.7%
Colorado	9.9%	8.5%	46.7%	19.0%	15.9%
Commonwealth of Puerto Rico	9.5%	10.8%	51.2%	13.3%	15.2%
Connecticut	8.5%	6.2%	53.0%	14.0%	18.3%
Delaware	7.7%	9.8%	53.6%	15.5%	13.4%
District of Columbia	8.0%	10.4%	53.9%	13.4%	14.3%
Florida	7.9%	13.7%	50.3%	14.1%	14.0%
Georgia	7.0%	9.5%	52.0%	14.5%	17.0%
Hawaii	7.7%	7.9%	55.0%	14.0%	15.4%
Idaho	8.9%	7.9%	52.1%	17.5%	13.6%
Illinois	7.8%	8.7%	52.9%	13.8%	16.8%
Indiana	7.0%	11.0%	49.0%	18.6%	14.4%
Iowa	7.8%	8.1%	54.9%	17.3%	11.9%
Kansas	7.5%	8.4%	51.3%	18.6%	14.2%
Kentucky	7.2%	9.4%	46.5%	20.8%	16.1%
Louisiana	6.7%	9.7%	54.4%	13.2%	16.0%
Maine	8.0%	10.9%	51.5%	17.5%	12.1%
Maryland	9.1%	13.0%	53.1%	11.6%	13.2%
Massachusetts	8.8%	9.0%	48.1%	15.8%	18.3%
Michigan	7.1%	11.2%	54.7%	13.8%	13.2%
Minnesota	10.1%	11.3%	48.8%	15.1%	14.7%
Mississippi	6.3%	8.4%	55.4%	17.1%	12.8%
Missouri	7.3%	8.5%	49.8%	17.3%	17.1%
Montana	7.9%	7.7%	53.1%	18.2%	13.1%
Nebraska	8.3%	8.6%	50.3%	18.1%	14.7%
Nevada	8.0%	9.2%	55.3%	17.0%	10.5%
New Hampshire	8.3%	7.9%	52.0%	17.9%	13.9%
New Jersey	8.2%	8.6%	51.6%	12.9%	18.7%
New Mexico	7.8%	8.5%	50.4%	17.1%	16.2%
New York	7.4%	11.3%	54.5%	12.9%	13.9%

State	Cancer	Diabetes & Metabolic /Endocrine Disorders	Heart & Vascular Disease	Respiratory Disease	Other
North Carolina	7.3%	13.2%	48.4%	14.5%	16.6%
North Dakota	7.3%	9.5%	52.6%	15.7%	14.9%
Ohio	7.1%	11.9%	49.8%	16.0%	15.2%
Oklahoma	6.4%	8.1%	58.2%	17.2%	10.1%
Oregon	9.8%	12.0%	49.2%	15.0%	14.0%
Pennsylvania	7.7%	10.7%	50.4%	14.2%	17.0%
Rhode Island	7.3%	8.7%	54.5%	16.0%	13.5%
South Carolina	7.6%	9.2%	51.6%	14.5%	17.1%
South Dakota	7.5%	9.0%	52.3%	16.7%	14.5%
Tennessee	6.6%	11.7%	51.0%	16.7%	14.0%
Texas	7.1%	13.7%	48.4%	12.7%	18.1%
Utah	7.6%	8.2%	53.7%	13.6%	16.9%
Vermont	7.7%	9.6%	52.5%	15.4%	14.8%
Virginia	8.1%	12.3%	49.6%	14.0%	16.0%
Washington	9.9%	13.1%	49.4%	14.1%	13.5%
West Virginia	6.3%	12.5%	48.1%	20.2%	12.9%
Wisconsin	8.8%	9.9%	54.3%	14.8%	12.2%
Wyoming	7.2%	9.7%	50.8%	18.1%	14.2%
United States (Total)	**7.6%**	**11.4%**	**51.1%**	**14.6%**	**15.3%**

Source: GlobalData analysis of CDC Wonder Mortality data.

Exhibit A- 6. Government Fiscal Impact by State ($billions)

State	Reduced State Tax Revenues	Higher State Medicaid Costs	Higher State Government Employee Healthcare Costs	State Budget Implications	Federal Medicare & Medicaid
Alabama	$0.32	$0.19	$0.19	$0.70	$1.64
Alaska	$0.01	$0.13	$0.05	$0.19	$0.31
Arizona	$0.47	$0.44	$0.17	$1.08	$2.32
Arkansas	$0.14	$0.18	$0.11	$0.43	$1.05
California	$2.12	$3.99	$1.12	$7.23	$10.84
Colorado	$0.18	$0.37	$0.17	$0.72	$1.40
Commonwealth of Puerto Rico	$0.14	$0.28	$0.10	$0.52	$1.48
Connecticut	$0.18	$0.39	$0.12	$0.69	$1.19
Delaware	$0.08	$0.07	$0.04	$0.19	$0.42
District of Columbia	$0.04	$0.04	$0.03	$0.11	$0.21
Florida	$0.85	$0.94	$0.51	$2.30	$6.14
Georgia	$0.56	$0.43	$0.35	$1.34	$2.85
Hawaii	$0.12	$0.09	$0.05	$0.26	$0.43
Idaho	$0.08	$0.10	$0.06	$0.24	$0.65
Illinois	$0.94	$1.24	$0.41	$2.59	$4.18
Indiana	$0.40	$0.47	$0.21	$1.08	$2.33
Iowa	$0.15	$0.18	$0.12	$0.45	$1.04
Kansas	$0.16	$0.11	$0.13	$0.40	$0.81
Kentucky	$0.31	$0.36	$0.16	$0.83	$1.89
Louisiana	$0.24	$0.41	$0.17	$0.82	$1.88
Maine	$0.09	$0.12	$0.05	$0.26	$0.61
Maryland	$0.31	$0.51	$0.21	$1.03	$1.89
Massachusetts	$0.37	$0.81	$0.26	$1.44	$2.75
Michigan	$0.64	$0.72	$0.24	$1.60	$3.53
Minnesota	$0.29	$0.50	$0.18	$0.97	$1.82
Mississippi	$0.21	$0.13	$0.13	$0.47	$1.07
Missouri	$0.24	$0.34	$0.21	$0.79	$2.11

State	Reduced State Tax Revenues	Higher State Medicaid Costs	Higher State Government Employee Healthcare Costs	State Budget Implications	Federal Medicare & Medicaid
Montana	$0.03	$0.08	$0.04	$0.15	$0.42
Nebraska	$0.09	$0.11	$0.09	$0.29	$0.60
Nevada	$0.03	$0.17	$0.07	$0.27	$0.80
New Hampshire	$0.03	$0.09	$0.04	$0.16	$0.44
New Jersey	$0.65	$0.68	$0.29	$1.62	$2.71
New Mexico	$0.13	$0.20	$0.09	$0.42	$0.99
New York	$1.08	$2.52	$0.78	$4.38	$7.11
North Carolina	$0.47	$0.73	$0.40	$1.60	$3.94
North Dakota	$0.05	$0.04	$0.04	$0.13	$0.24
Ohio	$0.75	$0.86	$0.38	$1.99	$4.42
Oklahoma	$0.20	$0.32	$0.15	$0.67	$1.47
Oregon	$0.19	$0.42	$0.16	$0.77	$1.71
Pennsylvania	$0.56	$0.98	$0.33	$1.87	$4.29
Rhode Island	$0.06	$0.09	$0.03	$0.18	$0.33
South Carolina	$0.36	$0.27	$0.17	$0.80	$1.84
South Dakota	$0.03	$0.06	$0.03	$0.12	$0.30
Tennessee	$0.37	$0.33	$0.21	$0.91	$1.92
Texas	$0.85	$1.23	$1.06	$3.14	$6.99
Utah	$0.13	$0.10	$0.09	$0.32	$0.64
Vermont	$0.02	$0.05	$0.02	$0.09	$0.23
Virginia	$0.37	$0.78	$0.31	$1.46	$2.79
Washington	$0.30	$0.71	$0.26	$1.27	$2.45
West Virginia	$0.11	$0.13	$0.07	$0.31	$0.84
Wisconsin	$0.38	$0.35	$0.18	$0.91	$1.96
Wyoming	$0.02	$0.03	$0.03	$0.08	$0.16
United States (Total)	**$16.9**	**$24.9**	**$10.9**	**$52.7**	**$106.4**

Source: GlobalData analysis.

Exhibit A- 7. Projected Potential 10-Year Medical Cost Savings from Sustained Weight Loss Among Adults with Obesity ($billions)

State	5% Weight Loss	10% Weight Loss	15% Weight Loss	20% Weight Loss	25% Weight Loss
Alabama	$13.2	$15.0	$17.2	$18.5	$20.2
Alaska	$4.3	$4.8	$5.3	$6.4	$7.1
Arizona	$9.1	$17.6	$25.6	$32.7	$40.3
Arkansas	$6.3	$7.2	$7.8	$9.3	$10.0
California	$40.7	$78.7	$112.1	$145.5	$176.5
Colorado	$4.3	$4.4	$8.1	$9.4	$10.1
Commonwealth of Puerto Rico	$1.2	$1.4	$1.5	$1.9	$2.2
Connecticut	$4.3	$6.1	$10.5	$12.7	$14.9
Delaware	$2.3	$2.8	$3.7	$4.4	$4.9
District of Columbia	$1.7	$2.6	$2.6	$3.1	$3.5
Florida	$24.9	$47.7	$68.1	$88.5	$107.2
Georgia	$28.7	$32.7	$34.0	$39.7	$42.4
Hawaii	$2.7	$3.3	$4.0	$4.6	$5.3
Idaho	$4.0	$4.9	$5.9	$7.3	$7.9
Illinois	$21.2	$25.6	$31.3	$35.2	$40.3
Indiana	$15.4	$20.4	$26.0	$31.8	$34.8
Iowa	$4.2	$8.1	$11.6	$15.0	$18.2
Kansas	$6.5	$8.1	$9.9	$11.9	$13.6
Kentucky	$10.4	$13.4	$16.0	$18.5	$20.2
Louisiana	$10.2	$11.4	$14.6	$17.5	$17.9
Maine	$3.7	$4.2	$5.4	$6.3	$7.1
Maryland	$16.8	$25.6	$26.0	$30.2	$33.9
Massachusetts	$17.2	$23.8	$28.2	$36.4	$40.5
Michigan	$20.9	$25.8	$31.7	$38.8	$43.2
Minnesota	$11.1	$13.5	$16.3	$19.5	$22.0
Mississippi	$5.1	$5.8	$7.4	$8.4	$9.4
Missouri	$14.7	$17.8	$21.9	$26.4	$29.3
Montana	$2.4	$2.8	$3.4	$3.8	$4.2
Nebraska	$3.8	$4.6	$6.0	$7.5	$8.3
Nevada	$4.7	$6.8	$9.2	$11.4	$13.0
New Hampshire	$3.5	$4.4	$5.2	$6.2	$6.7
New Jersey	$18.3	$21.5	$27.2	$32.2	$36.0
New Mexico	$3.5	$5.0	$5.5	$7.8	$8.2

State	5% Weight Loss	10% Weight Loss	15% Weight Loss	20% Weight Loss	25% Weight Loss
New York	$36.5	$46.6	$55.1	$63.4	$73.2
North Carolina	$19.5	$25.3	$32.1	$40.8	$47.3
North Dakota	$1.9	$2.3	$3.0	$4.1	$4.5
Ohio	$36.9	$41.5	$52.4	$56.8	$62.9
Oklahoma	$10.1	$12.4	$15.5	$17.0	$18.4
Oregon	$11.2	$13.7	$16.5	$20.6	$23.2
Pennsylvania	$19.8	$28.8	$38.0	$43.4	$48.3
Rhode Island	$2.1	$2.5	$3.0	$3.6	$4.0
South Carolina	$13.2	$16.0	$17.4	$21.4	$23.8
South Dakota	$2.0	$2.5	$2.6	$3.7	$4.1
Tennessee	$14.8	$15.0	$22.3	$27.9	$32.1
Texas	$79.4	$82.4	$88.7	$107.1	$124.6
Utah	$5.4	$6.3	$6.5	$7.1	$8.7
Vermont	$1.2	$1.4	$1.5	$1.9	$2.0
Virginia	$22.3	$22.6	$23.0	$29.2	$30.7
Washington	$15.2	$18.5	$20.2	$24.3	$24.8
West Virginia	$5.6	$5.7	$6.7	$8.3	$8.9
Wisconsin	$13.1	$14.2	$17.7	$20.3	$22.5
Wyoming	$1.2	$1.4	$1.5	$1.9	$2.2
United States (Total)	**$661.0**	**$850.7**	**$1,045.6**	**$1,264.2**	**$1,442.5**

Source: GlobalData Disease Prevention & Treatment Microsimulation Model (DPTMM). Savings estimates exclude treatment costs.

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