



THE 2024 JOINT ECONOMIC REPORT

R E P O R T

OF THE

**JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES**

ON THE

**2024 ECONOMIC REPORT
OF THE PRESIDENT**

**CHAPTER 4 OF THE
REPUBLICAN RESPONSE**

**Reaching Fiscal Solutions Through
Healthcare Innovation**

JUNE 17, 2024

**Joint Economic Committee Republicans
Vice Chairman David Schweikert**

CHAPTER 4: REACHING FISCAL SOLUTIONS THROUGH HEALTHCARE INNOVATION

Last year, the Joint Economic Committee Republicans outlined the economic and social costs of obesity. JEC Republicans estimated that obesity causes an average of \$5,155 in average excess medical costs per person who suffers from the condition, which correspond to \$520 billion in total excess healthcare costs in 2023 alone.¹ This year, we update these figures given changing obesity trends and calculate that obesity will result in \$8.2 to \$9.1 trillion in excess medical expenditures over the next ten years for those suffering from the disease.² We also estimate that reductions in labor supply and labor productivity due to obesity result in the size of the economy being \$13.5 to \$14.7 trillion smaller over the next ten years than it otherwise would have been and that these reductions would result in \$2.4 to \$2.6 trillion in foregone tax revenue.

Even more significant than these economic costs are the dramatic impact that obesity has on individuals' health and well-being. Obesity is a causal risk factor for many diseases including diabetes, cardiovascular disease, and cancer and has a substantial impact on life expectancy.³ Last year's *Response* estimated that obesity is responsible for 4.7 years of life lost for the average person suffering from the disease and reduces the overall United States life expectancy by 2.1 years.⁴ Finding effective obesity treatments will dramatically improve both the personal and economic health of the United States.

¹ Joint Economic Committee (JEC) Republicans, *Republican Response to the Economic Report of the President* (U.S. Congress Joint Economic Committee, 2023): 41-42, <https://sen.gov/LVQYY>.

² Note: Figure is in real dollar terms.

³ JEC Republicans, *Response*, 40.

⁴ JEC Republicans, *Response*, 47.

As outlined in last year's *Response*, putting the United States on a sustainable fiscal path is necessary to fulfill the responsibilities outlined in the Employment Act of 1946 which declares that:

“It is the continuing policy and responsibility of the Federal Government [...] to promote maximum employment and production, increased real income, balanced growth, a balanced Federal budget, adequate productivity growth, proper attention to national priorities, achievement of an improved trade balance [...] and reasonable price stability.”⁵

As discussed in Chapter 2 of this year's *Response*, mandatory spending is a primary driver of the Federal deficit. Stabilizing the debt-to-GDP ratio requires running a primary deficit that is smaller than the difference between the real growth rate of the economy and the real interest rate on the debt, which is extremely difficult, if not impossible, to do without addressing mandatory programs.⁶ Targeted reforms to these programs remains one of the most pragmatic ways to stabilize the debt-to-GDP ratio. As outlined in Chapter 3 of last year's *Response*, reducing the burden of obesity through improved nutrition policy, treatment, and medical innovation may result in significantly lower aggregate healthcare spending. This Chapter highlights the changes that have occurred in the obesity space in the past year, including updated obesity projections and cost estimates, and presents an overview of the potential of obesity-related healthcare innovations that have risen to prominence.

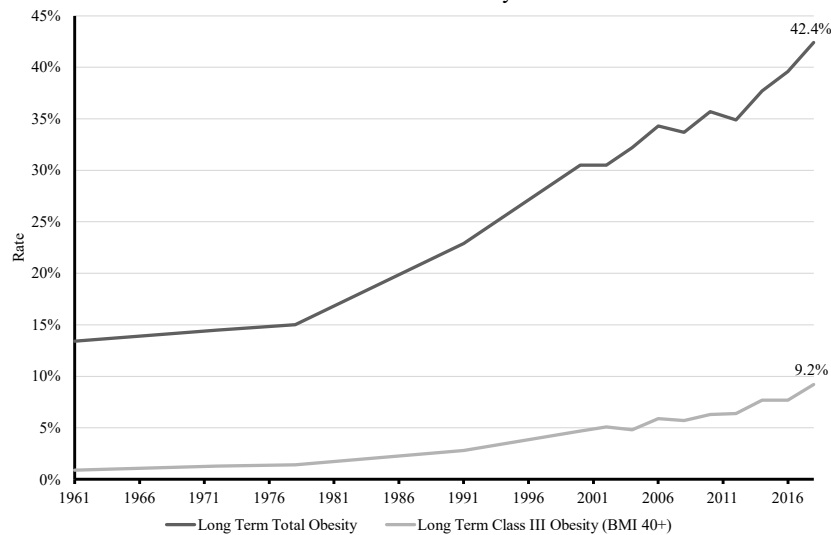
⁵ 15 U.S.C. 21 § 1021(a) (1946).

⁶ JEC Republicans, *Response*, 24-34.

Obesity Rates Continue to Rise at an Alarming Pace

Over the past 10 years, adult obesity and severe obesity prevalence have increased at a rate significantly faster than prior decades.⁷

Figure 4-1: Historic Rates of Adult Obesity (Ages 20+) and Class III Obesity



Source: CDC/NCHS, NHES and NHANES

Adult obesity rates have risen gradually since the 1980s and accelerated starting in the early 2010s. From 2009 through 2018, the obesity prevalence rate in adults grew by almost 19 percent

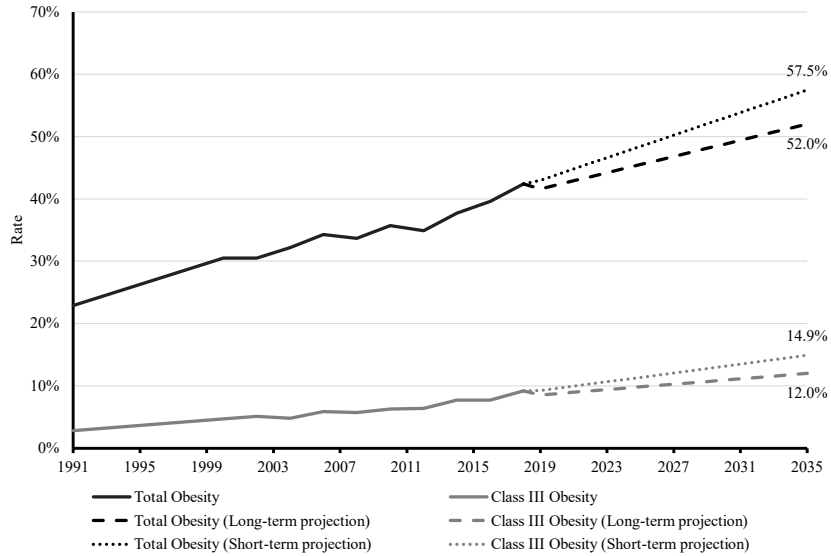
⁷ Cynthia L. Ogden et al., “Trends in Obesity Prevalence by Race and Hispanic Origin—1999-2000 to 2017-2018,” *Journal of the American Medical Association* 324, no. 12 (2020): 1208-10, <https://doi.org/10.1001/jama.2020.14590>; Cynthia L. Ogden and Margaret D. Carroll, “Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults: United States, Trends 1960–1962 Through 2007–2008,” Centers for Disease Control and Prevention, June 2010, https://www.cdc.gov/nchs/data/hestat/obesity_adult_07_08/obesity_adult_07_08.pdf.

while the prevalence of severe obesity grew by 46 percent.⁸ In the prior decade, 1999 to 2008, obesity prevalence grew approximately 10 percent while severe obesity prevalence grew 21 percent. Given that the 10-year growth rate of obesity prevalence nearly doubled from the prior 10-year period, JEC Republicans have updated obesity prevalence projections based on near and long-term obesity rates.

We project that the share of U.S. adults who are obese will rise from between 44.9 percent and 47.5 percent in 2024 to between 51.4 percent and 56.6 percent by 2034.⁹ These projections are based on a linear regression over the prior 10 years and 31 years of obesity rate data. Since the rate at which obesity has risen has been greater in the past 10 years than the past 31 years, obesity projections based on the past 10 years of obesity data serve as the upper bound of our estimates while projections based on the past 31 years serve as the lower bound. Figure 4-2 displays the projected obesity and severe obesity rates based on these parameters.

⁸ JEC Republicans calculations.

⁹ Our long-term growth scenario projects that 44.9 percent of adults will qualify as obese in 2024, while our near-term growth scenario projects the share will be 47.5 percent. Long-term growth scenario incorporates the past 31 years of data from 1988-2018 while the near-term growth scenario incorporates the past 10 years of data from 2009-2018. We use age-adjusted obesity data provided by the Centers for Disease Control and Ogden et al. in our projection. Our use of age-adjusted data means there will be slight deviations from our previous research in Chapter 3 of the 2023 *Response*. JEC Republicans, *Response*, 200; Cynthia L. Ogden et al., “Trends in Obesity Prevalence by Race and Hispanic Origin—1999-2000 to 2017-2018,” *Journal of the American Medical Association* 324, no. 12 (2020): 1208-10, <https://doi.org/10.1001/jama.2020.14590>.

Figure 4-2: Projected Adult (20+) Obesity Rates

Source: CDC/NCHS, NHES and NHANES, Ogden et al., JEC Republicans Staff Calculations

These results are significant for several reasons. First, even using a low-end projection of obesity rates, it is expected that by 2032 more than half the U.S. adult population will be obese. In our near-term projection, based on the past 10 years of obesity growth rates, the adult obesity rate can be expected to eclipse half the adult population as soon as 2027. Equally concerning are the projected severe obesity rates, which as outlined in Chapter 3 of last year's *Response*, are associated with significantly higher medical costs when compared to Class 1 and Class 2 obesity.¹⁰ Severe obesity rates can be expected to be between 11.8 percent and 14.6 percent by 2034.

¹⁰ For additional information on the definitions of the various Body Mass Index classifications, please see: JEC Republicans, *Response*, 42-43.

Rising Obesity is a Significant Drag on the Economy

In last year's *Response*, JEC Republicans estimated the costs of obesity and calculated that the Federal government will spend \$4.1 trillion on obesity related diseases over the next 10 years and that obesity related labor productivity and supply reductions will cost \$2.6 and \$5.6 trillion over the same span, respectively. This year's *Response* intends to provide new estimates to these figures using an updated methodology to estimate the aggregate economic cost of obesity.

There are three primary contributors to the overall economic cost of obesity: medical expenditures, labor productivity reductions, and labor supply reductions due to poor health. Given updated obesity prevalence figures, it is prudent to update the calculations of excess medical costs due to obesity. This year's estimates include private spending on obesity treatments to understand obesity's overall impact on the economy. We estimate that obesity will result in \$8.2 to \$9.1 trillion in excess medical expenditures over the next 10 years.

This calculation is derived from research by Cawley et al. that estimates the excess annual medical expenditures by various obesity classes per individual.¹¹ Because this number is indexed to 2017 dollars, we first adjust it for inflation using the CPI-U and CBO's projections of CPI-U for the next 10 years. In addition, Cawley et al. estimates that excess obesity costs are rising at a rate of 1.93 percent per annum, in inflation-adjusted dollars. For this reason, we apply an additional adjustment to the annual excess medical costs due to obesity that considers both general CPI-U

¹¹ John Cawley et al., "Direct Medical Costs of Obesity in the United States and the Most Populous States," *Journal of Managed Care and Specialty Pharmacy* 27, no. 3 (2021): 354-66, <https://doi.org/10.18553/jmcp.2021.20410>.

inflation and the 1.93 percent annual increase outlined in Cawley et al.

Next, we take Census projections of the U.S. population ages 20 and over for the next ten years and multiply it by the projected percentage of the U.S. population that will be either Class 1 and Class 2 obese or Class 3.¹² It is important to note that due to the dramatic difference in expenditures for Class 3 versus Class 1 and Class 2 obesity, each must be calculated separately. Using the calculations on the following page, we estimate that the excess cost of Class 1 and Class 2 obesity in 2024 is \$4,043 while for Class 3 it is \$9,895.

Additionally, because Class 1 and Class 2 obesity rates are not reported separately, we assume there is an equal proportion of Class 1 and Class 2 individuals. After calculating the annual estimates of the population of Class 1 and 2 as well as Class 3 individuals, we multiply the results by the adjusted annual excess costs of obesity to calculate the total excess cost of obesity for a given year. As outlined in the previous section, there is a range of projected obesity rates due to the differences in the growth rate in obesity prevalence over the past 31 years versus the past 10 years. The 31-year growth rate represents the low-end estimate. These calculations can be expressed as the following equations:

¹² U.S. Census Bureau, “Projected Population by Five-year Age Group and Sex (NP2023-T3),” 2023, <https://www2.census.gov/programs-surveys/popproj/tables/2023/2023-summary-tables/np2023-t2.xlsx>.

$$\begin{aligned}
 & \text{(Inflation-Adjusted Excess Medical Costs per Person)}_t \\
 & = \\
 & \quad \text{(Excess Medical Costs)}_{t-1} \\
 & \quad \times \\
 & \quad (1 + \text{Annual Increase in CPI-U} + 0.0193) \\
 & \quad \mathbf{c_{it} = c_{i(t-1)} \times ((1 + \pi_t) + 0.0193)}
 \end{aligned}$$

c_{it} = Total medical costs for person i in year t
 π_t = Inflation in year t , or increase in CPI-U in year t

$$\begin{aligned}
 & \text{(Total Excess Medical Costs)}_t \\
 & = \\
 & \quad \text{Census Projection of Population Ages 20+} \\
 & \quad \times \\
 & \quad \text{Estimated Share of Class 1 or 2 Obesity} \\
 & \quad \times \\
 & \quad \text{(Average Excess Medical Costs per Person)}_t
 \end{aligned}$$

$$\mathbf{C_t = p_t \times s_t \times c_t}$$

C_t = Total excess medical costs in year t
 p_t = Population in year t
 s_t = Share of population with Class 1 or 2 obesity in year t
 c_t = Average individual excess medical costs in year t

$$\mathbf{P = \sum_{t=2024}^{2033} C_t}$$

P = Total 10-year cost projection
 C_t = Total excess medical costs for Class 1 and 2
 obesity in year t

This process is then repeated for Class 3 obesity and the two results are summed to estimate the total excess medical costs of obesity.

Labor Supply and Productivity Costs

Obesity also leads to economic costs through reductions in the aggregate labor supply due to the curtailment of life expectancies. As outlined in last year's *Response*, obesity has a significant impact on life expectancy, reducing the average lifespan of someone with the disease by 4.7 years and the overall lifespan of the entire U.S. adult population by 2.1 years.¹³ When estimating lost output due to reduced lifespan, we incorporate research that suggests that a 1 percent increase in the labor supply results in a 0.8 percent increase in long-run economic activity.¹⁴ We model the effect of early mortality due to obesity on labor supply by assuming obese persons devote similar proportions of their working life to work and retirement as does the average person.¹⁵

We then divide the weighted estimate of years of life lost due to obesity, as calculated in last year's *Response*, by the average worker's "work span" to provide an annual estimate of the labor supply lost each year due to early mortality attributable to obesity. Work span in this context is the 45 years in between an adult turning 20 (the first year in which we have adult obesity data) and the average retirement age of 65.

Next, we use CBO's projections of nominal GDP in a given year and multiply it by 0.8 percent, to calculate the labor share of

¹³ JEC Republicans, *Response*, 47-48.

¹⁴ JEC Republicans, *Response*, 103-4.

¹⁵ JEC Republicans, *Response*, 55.

potential GDP.¹⁶ This figure is then multiplied by the weighted percent reduction in work span to estimate the GDP lost due to reductions in the labor supply. We weigh this percent reduction each year to account for the fact that the reduction in work span will be higher in the future as obesity and severe obesity rates rise. Ultimately, we estimate that the U.S. will lose between \$10.9 to \$11.9 trillion in GDP due to labor supply reductions from obesity over the next 10 years. The range is derived from the various obesity growth rates outlined previously in this section. Using CBO's estimates for income as a percent of GDP, we estimate that this would result in \$1.93 to \$2.12 trillion in lost tax revenue.¹⁷

Labor Productivity Costs

A similar methodology can be applied to calculate the labor productivity costs of obesity, namely through “presenteeism”, in which employees are not able to work at full capacity due to illness or other related reasons. Last year's *Response* discussed research that estimates that obese workers are absent 2 to 2.5 more days each year than normal BMI workers and that obesity causes a 2 percent reduction in overall productivity for workers.¹⁸ Using this assumption, we can estimate how much higher U.S. output would be given our updated projections of obesity. After calculating the labor share of potential GDP, we multiply it by the projected

¹⁶ We multiply by 0.8 percent because a 1 percent increase in the labor supply results in a 0.8 percent increase in long-run economic activity.

¹⁷ Using CBO's estimates of tax receipts as percentage of GDP for 2024-2033. Congressional Budget Office (CBO), *The Budget and Economic Outlook: 2024 to 2034* (February 2024): Table 2, <https://www.cbo.gov/system/files/2024-02/51134-2024-02-Historical-Budget-Data.xlsx>.

¹⁸ Ian Kudel, Joanna C. Huang, and Rahul Ganguly, “Impact of Obesity on Work Productivity in Different US Occupations,” *Journal of Occupational and Environmental Medicine* 60, no. 1 (2018): 6-11, <https://doi.org/10.1097/JOM.0000000000001144>; JEC Republicans, *Response*, 55.

obesity rates each year and calculate what a 2 percent increase in this number would be.¹⁹ Ultimately, we find that this increase in output would be \$2.6 to \$2.8 trillion dollars over the next 10 years. This translates to \$461 to \$498 billion in lost tax revenue.

Healthcare Innovation

The prevalence and economic costs of obesity continue to grow at an astonishing rate, and finding policies that can reduce the burden of the disease could dramatically improve the U.S.’ personal and fiscal health. Fortunately, significant progress has been made in the fight against obesity even within the past year. There has been a rise in AI-powered wearable technologies such as smart watches that have helped monitor and screen for various obesity-related comorbidities, but one innovation that has received significant attention is the class of diabetes treatment and weight loss drugs known as GLP-1s.²⁰

GLP-1s (glucagon-like peptide 1) are a class of medication used to treat diabetes and obesity. These drugs work by regulating insulin and imitating the hormone glucagon-like peptide 1 which suppresses appetite and releases insulin.²¹ While these drugs have been approved to treat diabetes since 2005, they have received significant attention in recent years due to two GLP-1s being

¹⁹ Labor share of potential GDP is calculated the same as it was for the labor supply reduction calculation.

²⁰ Stefano Canali, Viola Schiaffonati, and Andrea Aliverti, “Challenges and Recommendations for Wearable Devices in Digital Health: Data Quality, Interoperability, Health Equity, Fairness,” *PLOS Digital Health* 1, no. 10 (2022), <https://doi.org/10.1371/journal.pdig.0000104>.

²¹ Dani Blum, “What is Ozempic and Why is it Getting So Much Attention?” *The New York Times*, November 22, 2022, <https://www.nytimes.com/2022/11/22/well/ozempic-diabetes-weight-loss.html>.

approved specifically for weight loss.²² The medical literature suggests that these drugs have been effective in reducing cardiovascular events and all-cause mortality in patients with Type 2 diabetes and obesity.²³ Additionally, these drugs lead to lower caloric intake, suppressed appetite, and fewer food cravings for patients using them.²⁴ Research suggests that these drugs, when combined with lifestyle intervention, result in a mean body weight difference for those with diabetes of 6.1 to 17.4 percent when compared to a placebo.²⁵ These results suggest that there could be substantial reductions in obesity given sufficient uptake of these medications.

Cost Considerations

While GLP-1s have the potential to significantly improve outcomes for those with diabetes and obesity, currently the drugs are prohibitively expensive. Without insurance coverage, these drugs can cost nearly \$1,000 a month, and, even with insurance

²² Kelsey H. Sheahan, Elizabeth A. Wahlberg, and Matthew P. Gilbert, “An Overview of GLP-1 Agonists and Recent Cardiovascular Outcomes Trials,” *Postgraduate Medical Journal* 96, no. 1133 (2020): 156-61, <https://doi.org/10.1136/postgradmedj-2019-137186>; Rachael Ajmera and Adrienne Youdim, “GLP-1 Agonist For Weight Loss: What You Need to Know,” *Forbes Health*, September 25, 2023, <https://www.forbes.com/health/weight-loss/glp-1-agonists/>.

²³ Naveed Sattar et al., “Cardiovascular, mortality, and kidney outcomes with GLP-1 receptor agonists in patients with type 2 diabetes: a systematic review and meta-analysis of randomised trials,” *The Lancet Diabetes & Endocrinology* 9, no. 10 (2021): 653-62, [https://doi.org/10.1016/s2213-8587\(21\)00203-5](https://doi.org/10.1016/s2213-8587(21)00203-5).

²⁴ John Blundell et al., “Effects of once-weekly semaglutide on appetite, energy intake, control of eating, food preference and body weight in subjects with obesity,” *Diabetes, Obesity & Metabolism* 19, no. 9 (2017): 1242-51, <https://doi.org/10.1111/dom.12932>.

²⁵ Mojca Jensterle, Manfredi Rizzo, Martin Haluzik, and Andrej Janež, “Efficacy of GLP-1 RA Approved for Weight Management in Patients with or Without Diabetes: A Narrative Review,” *Advances in Therapy* 39, no. 6 (2022): 2452-67, <https://doi.org/10.1007/s12325-022-02153-x>.

coverage, they can cost up to \$300 a month.²⁶ Fortunately, costs can be reduced significantly as these drugs come off patent. Research suggests that when drugs become generic, their price drops significantly.²⁷ Two GLP-1s are expected to come off patent later this year. Furthermore, 74 anti-obesity medications are in clinical trials, although the impact of this on future prices is not immediately clear.²⁸

Price is of major importance when the market and economic potential of these drugs is so large. Briggs and Kodnani estimate that the potential market for GLP-1s could be 133 million Americans, with 74 million of the individuals of the potential market using the drug specifically to treat obesity rather than exclusively Type 2 diabetes.²⁹ They estimate that within five years 10 to 70 million Americans could be taking GLP-1 medications. The wide range for the estimate depends on a variety of factors, including clinical trial approval of drugs being tested, price of generics, and general take-up and usage rates. Depending on the total usage and effectiveness of GLP-1s, they estimate that anti-

²⁶ Benedic N. Ippolito and Joseph F. Levy, “Estimating the Cost of New Treatments for Diabetes and Obesity,” American Enterprise Institute Economic Perspective (September 18, 2023), <https://www.aei.org/research-products/report/estimating-the-cost-of-new-treatments-for-diabetes-and-obesity/>.

²⁷ Simon van der Schans et al., “The impact of patent expiry on drug prices: insights from the Dutch market,” *Journal of Market Access & Health Policy* 9, no. 1 (2020), <https://doi.org/10.1080/20016689.2020.1849984>; Gerard T. Vondeling, Qi Cao, Maarten J. Postma, and Mark H. Rozenbaum, “The Impact of Patent Expiry on Drug Prices: A Systematic Literature Review,” *Applied Health Economics and Health Policy* 16, no. 5 (2018): 653-60, <https://doi.org/10.1007/s40258-018-0406-6>.

²⁸ Nadia Bey, “The Biopharma Patent Cliff: 9 Drugs Losing Exclusivity by the End of 2023,” *BioSpace*, <https://www.biospace.com/article/9-drugs-losing-patents-or-exclusivity-clauses-by-the-end-of-2023>.

²⁹ Joseph Briggs et al., “The Economic Potential of Accelerated Healthcare Innovation,” Goldman Sachs Research (February 2024).

obesity medications could potentially raise GDP levels by 0.1 percent to 1.1 percent with a median GDP boost of 0.4 percent.

Pricing also has a large impact when estimating the potential benefits of GLP-1s to the Federal government. As debates continue as to whether Medicare and Medicaid should cover these drugs, it is important to have an accurate estimate of their long-term costs. The Congressional Budget Office (CBO) has made note of the potential savings from GLP-1s and has solicited further information about the drugs, such as take-up rates and long-term cost projections given changing pricing.³⁰ If prices fall enough to where it becomes cost effective for the Federal government to cover these drugs, GLP-1s could drastically improve the nation's overall fiscal situation, while ensuring Americans live longer, healthier lives. For this reason, it is important to foster a regulatory environment in which innovators have the ability test and design new drugs without excessive intervention that unreasonably impedes progress.

Economic and Industry Changing Potential

In addition to the overall reduced expenditures on healthcare, reducing obesity would change the types of healthcare individuals consume. The prevalence of obesity comorbidities such as cardiovascular disease, osteoarthritis, sleep apnea, etc. would decline and, therefore, healthcare expenditures on these diseases would also fall. Reduced demand for these treatments could drive down healthcare costs and insurance premiums for all consumers as overall demand for healthcare falls. Demand for treatments related to obesity, such as joint and bariatric surgery, may also fall,

³⁰ Phill Swagel, "A Call for New Research in the Area of Obesity," Congressional Budget Office, October 5, 2023, <https://www.cbo.gov/publication/59590>.

leading to lower prices for other types of obesity-related treatments.

A dramatic reduction in obesity due to GLP-1s could have a widespread impact on other sectors of the economy beyond healthcare. For example, GLP-1s are also observed to be impacting consumers' food choices. Initial survey data suggests that after starting on an anti-obesity medication, patients consumed more healthy and less unhealthy food.³¹ These survey results fall in line with the medical literature on GLP-1s, which suggests that these drugs reduce caloric consumption and food cravings.³² Widespread use of GLP-1s could have a large impact on the restaurant and food industry as consumer preferences shift and consumers choose to eat less and prefer healthier foods. These preference changes could have a widespread impact on the agricultural sector and global supply chains if consumers suddenly demand less processed food and less food overall. Changing consumption habits may already be occurring as food industry executives have already made note of GLP-1s and their potential as a headwind for the snack food industry and food industry as a whole. In October 2023, the CEO of Walmart reported a decline in overall food purchases that may be attributable to GLP-1 usage.³³ Although it is too early to tell the magnitude of the impact of these drugs on the food industry, the fact that executives have recognized them as a potential business headwind signifies that they may have industry-changing potential.

³¹ Morgan Stanley, "Could Obesity Drugs Take a Bite Out of the Food Industry?", September 5, 2023, <https://www.morganstanley.com/ideas/obesity-drugs-food-industry>.

³² Blundell et al., "Effects of once-weekly semaglutide," 1248-49.

³³ Brendan Case and Shelly Banjo, "Ozempic Is Making People Buy Less Food, Walmart Says," *Bloomberg*, October 4, 2023, <https://www.bloomberg.com/news/articles/2023-10-04/walmart-says-ozempic-weight-loss-drugs-causing-slight-pullback-by-shoppers>.

Box 4-1: Nutrition

Changing food consumption habits are important as diet is understood to be one of the main factors contributing to the U.S.' comparatively high obesity rates.³⁴ Before the dramatic rise in obesity rates starting in the 1980s, poor nutrition in the United States was largely due to calorie deficits rather than surpluses.³⁵ Today, poor nutrition is more likely to be due to an excessive amount of calories, fats, and unhealthy added sugars.³⁶ To combat poor nutrition, the United States has a variety of food programs, including the Supplemental Nutrition Assistance Program (SNAP), the Emergency Food Assistance Program (TEFAP), and the Commodity Supplemental Food Program (CSFP).³⁷ These programs are funded through an omnibus bill known as the farm bill, which is authorized every five years and establishes agricultural and nutrition policy.³⁸

³⁴ Varundeep Rakhra et al., "Obesity and the Western Diet: How We Got Here," *Missouri Medicine* 117, no. 6 (2020): 536-38, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7721435/>.

³⁵ Institute of Medicine (US) Committee on Examination of Front-of-Package Nutrition Rating Systems and Symbols, *Front-of-Package Nutrition Rating Systems and Symbols: Phase I Report*, ed. Ellen A. Wartella et al. (National Academies Press [US], 2010), <https://doi.org/10.17226/12957>; Chris Edwards, "SNAP: High Costs, Low Nutrition." *Cato Institute*, September 1, 2023, <https://www.cato.org/briefing-paper/snap-high-costs-low-nutrition>.

³⁶ Dietary Guidelines Advisory Committee (DGAC), *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2020-2025*, U.S. Department of Health and Human Services, U.S. Department of Agriculture, <https://www.dietaryguidelines.gov/resources/2020-2025-dietary-guidelines-online-materials>.

³⁷ Feeding America, "Federal Food Assistance Programs," accessed May 2024, <https://www.feedingamerica.org/take-action/advocate/federal-hunger-relief-programs>.

³⁸ United States Senate Committee on Agriculture, Nutrition, and Forestry, "The Farm Bill," <https://www.agriculture.senate.gov/farm-bill>.

The farm bill was set to be reauthorized in 2023 and would authorize more than \$120 billion a year in spending on food assistance programs like SNAP and another \$30 billion on various subsidies for farming and food production.³⁹ Last year's *Response* overviewed the ways in which nutrition programs can be reformed to better achieve their goals, which is improving nutrition.⁴⁰ JEC Republicans concluded that the government should avoid policies that create negative externalities in which unhealthy behavior is exacerbated or encouraged. A specific aspect of farm policy that has been under significant scrutiny are the farming subsidies that provide insurance, loss coverage, and disaster aid to farmers of over twenty crops.⁴¹ The largest beneficiaries of these premium subsidies are corn, soy, and wheat producers who receive nearly 70 percent of all premium farm subsidies.⁴²

Given the type of crops being subsidized, the academic literature suggests that these subsidies may distort the market for food, which leads to the production of cheaper, and more calorie dense food. Research suggests that subsidies reduce crop diversification by mitigating the risks of poor crop yields and volatile prices.⁴³ Alternatively, just like with any other investment, farmers could mitigate risk through diversification of the types of crops planted. The reduced need to diversify crops in conjunction with the

³⁹ Chris Edwards, "Farm Bill 2023 and Obesity," Cato Institute blog, April 6, 2023, <https://www.cato.org/blog/farm-bill-2023-obesity>.

⁴⁰ JEC Republicans, *Response*, 57-59.

⁴¹ Chris Edwards, "Cutting Federal Farm Subsidies," Cato Institute blog, August 31, 2023, <https://www.cato.org/briefing-paper/cutting-federal-farm-subsidies#types-farm-subsidy>.

⁴² Environmental Working Group, "Share of premium subsidies by crop, 1995-2023," https://farm.ewg.org/cropinsurance.php?fips=00000&summpage=PS_BY_CROP®ionname=theUnitedStates.

⁴³ Chris Edwards, "Agricultural Subsidies," Downsizing the Federal Government, April 16, 2018, <https://www.downsizinggovernment.org/agriculture/subsidies>.

discrepancy in the types of crops receiving the most subsidies may be artificially suppressing the production of more healthy crops like fruits and vegetables.⁴⁴ Jackson et al. finds that the price of fruits and vegetables has increased in real dollar terms since 1985, meanwhile the cost of sugar, fats, and soft drinks has fallen.⁴⁵ Although it cannot be casually established that subsidies are the reason for these price changes, it follows that subsidies for certain foods could lead to increased production and therefore lower costs of certain foods for consumers.

That said, the academic literature on the effect of these subsidies on obesity is mixed. Alston, Sumner, and Vosti find that the impact of farm policy on obesity rates has been insignificant due to the relatively small impact that the subsidies have on price.⁴⁶ On the other hand, Franck, Gandi, and Eisenberg find that “Although findings suggest that eliminating all subsidies would have a mild impact on the prevalence of obesity, a revision of commodity programs could have a measurable public health impact on a population scale, over time.”⁴⁷

⁴⁴ Paulina Enck, “PRIMER: Agriculture Subsidies and Their Influence on the Composition of U.S. Food Supply and Consumption,” American Action Forum press release, November 3, 2021, <https://www.americanactionforum.org/press-release/primer-agriculture-subsidies-and-their-influence-on-the-composition-of-u-s-food-supply-and-consumption/>.

⁴⁵ Richard J. Jackson et al., “Agriculture Policy Is Health Policy,” *Journal of Hunger & Environmental Nutrition* 4, no. 3-4 (2009): 393-408, <https://doi.org/10.1080/19320240903321367>.

⁴⁶ Julian M. Alston, Daniel A. Sumner and Stephen A. Vosti, “Farm Subsidies and Obesity in the United States: National Evidence and International Comparisons,” *Food Policy* 33, no. 6, (2008): 470-79, <https://doi.org/10.1016/j.foodpol.2008.05.008>.

⁴⁷ Caroline Franck, Sonia M. Grandi and Mark J. Eisenberg, “Agricultural Subsidies and the American Obesity Epidemic,” *American Journal of Preventative Medicine* 45, no. 3 (2013): 327-33, <https://doi.org/10.1016/j.amepre.2013.04.010>.

The inconclusive nature of the findings on the impact of farm subsidies on obesity rates warrants further research. Especially as Congress continues discussions around the farm bill reauthorization, it is necessary for policymakers to have a clear understanding of the health impacts of its farm policy. Given the astounding costs of obesity, policymakers should be sensitive to how policies could adversely affect nutrition and, therefore, obesity.

Behavioral Changes

The increased disposable income that would come from people spending less on healthcare and food could also impact other sectors like the clothing and fitness industry. Individuals using anti-obesity medication (AOMs) reported exercising more and changing their clothing consumption following starting the drug.⁴⁸ Individuals on AOMs also reported buying more athleisure wear and less luxury clothing items and reported being twice as likely to engage in weekly exercise since taking the drug. While some of this change in behavior may be due to selection bias, i.e. people taking these drugs now are more inclined to engage in healthier habits than the general population would be if given GLP-1s, these responses at least signal how GLP-1s could be changing consumption and behavioral choices. It is not currently clear that distributing AOMs to the general population would yield the same results, but these initial survey results show promise.

A large reduction in obesity would have widespread positive effects on both Federal spending and the health and behavior of the country overall. As behavior changes and people become more productive and have higher incomes due to lower BMI, dramatic

⁴⁸ Zachariah Reltano, "Food for Thought: The Potential Ripple Effect of GLP1s," Ro, October 10, 2023, <https://ro.co/weight-loss/potential-ripple-effect-of-glp1s/>.

changes could occur in nearly all sectors of the economy. Even seemingly unrelated areas, like military recruitment, could see improvements as individuals become healthier and thus more combat ready. The micro and macroeconomic effects of these drugs could also have large implications on demographic indicators such as fertility and labor supply as people become more productive due to reduced weight. Research suggests that obesity puts women at a greater risk of infertility and that reductions in BMI have been shown to improve fertility outcomes.⁴⁹ Reductions in BMI could expand the labor force both through increased fertility and through individuals returning to the labor force who were previously unable to work due to obesity-related health issues. Ultimately, GLP-1s offer a potential revolutionary step forward in health and offer the potential to materially improve the economic outlook through a large reduction in obesity.

Call for Further Research

Given how quickly obesity treatments are evolving, it is imperative for researchers to have access to timely and accurate data on the effectiveness of these drugs and their pricing. As Congress considers expanding Medicare coverage to include anti-obesity medication, it is necessary to consider all the potential economic effects and not restrict the analysis to the 10-year window that is typical for legislation. CBO recently published a report that identified a shortfall of data and research, specifically regarding the effect of targeting the Medicare coverage of anti-obesity medications to cases that would substantially reduce

⁴⁹ Erica Silvestris, Giovanni de Pergola, Raffaele Rosania, and Giuseppe Loverro, "Obesity as Disruptor of the Female Fertility," *Reproductive Biology and Endocrinology* 16, no. 22 (2018), <https://doi.org/10.1186/s12958-018-0336-z>.

healthcare costs.⁵⁰ JEC Republicans encourage CBO to use outside-the-box approaches to give Congress and public health researchers readily available analysis of policy proposals.

For example, using currently available data, CBO could evaluate a series of breakeven points to determine where the cost of policies that expand Medicare coverage to targeted individuals, such as those suffering from Class 3 obesity or those with certain comorbidities, is equivalent to reductions in other government expenses. This information would give policymakers the tools to craft fiscally responsible anti-obesity policies.

The budgetary impact of covering AOMs for obese individuals who are on Medicaid should also be analyzed. Given that the Medicaid population is generally younger than the Medicare population, this could have a correspondingly larger effect on long-term healthcare spending given the longer window through which reductions could take effect. Such analysis should explicitly consider the avoided future healthcare costs attributable to preventing any projected increase in obesity severity in absence of the intervention. It may be the case that policies that have a larger upfront cost result in longer-term savings as certain comorbidities that are costly to the Federal government are avoided.

CBO should also consider the potential of rapid price reductions of AOMs. As of September 2023, an estimated 74 anti-obesity medications are in some phase of clinical trials.⁵¹ If additional AOMs come to market or become available as generics, there might be significant impacts on the price of these drugs, and

⁵⁰ Swagel, “A Call for New Research in the Area of Obesity.”

⁵¹ Elaine Chen, Allison DeAngelis, and J. Emory Parker, “Stat+ Obesity Drug Tracker,” *Stat*, September 12, 2023, <https://www.statnews.com/2023/09/12/new-weight-loss-drug-tracker-novo-nordisk-eli-lilly/>.

scoring could be affected. Given the uncertainty surrounding various aspects of AOMs, such as long-term price, take-up rates, and mean weight reductions, CBO should account for these uncertainties when scoring any relevant legislation.

Macroeconomic Effects

Accurately estimating the fiscal impact of AOMs will also require tracking and assessing the macroeconomic effects of a reduction in obesity rates. How might economic measures such as labor force participation and productivity be impacted, and how would incorporating changes to these economic indicators impact the scoring of Medicare and Medicaid coverage of anti-obesity medications? As discussed in the prior section, AOMs seem to at least have some impact on individuals' behavior. It may be the case that a reduction in obesity results in more individuals returning to the workforce and an aggregate increase in productivity. This could lead to greater tax revenues than anticipated, which should be reflected in the scoring of a bill that results in more individuals using AOMs. As CBO and other researchers estimate the impact of AOMs, it is important to assess how they may impact economic measures beyond healthcare spending, especially regarding labor supply.

Need for Additional Data

As the JEC Republicans and others continue their obesity research, it is imperative to have access to timely and accurate data. Especially as the anti-obesity healthcare sphere evolves rapidly, it is important for there to be consistent and detailed obesity data. Regularly updated data on the prevalence and characteristics of obesity in America is a valuable tool in both crafting and assessing the effectiveness of anti-obesity policy. Specifically, data on the Federal expenditures associated with each obesity class and their various comorbidities would be valuable as debates continue over

whether Medicare should cover AOMs. Additionally, greater data transparency from the private sector would allow researchers to better estimate the effects of AOMs. Data such as take-up rates, average time spent on the medication, mean weight reductions by obesity class, and average annual costs are all important pieces to understanding the impact of AOMs. Greater data transparency can help better inform researchers and policymakers as they move forward in addressing the obesity crisis.