



Original Investigation

Fiscal Impact of Expanded Medicare Coverage for GLP-1 Receptor Agonists to Treat Obesity

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Abstract

IMPORTANCE Despite the clinical benefits of treating obesity and related complications, glucagon-like peptide-1 receptor agonists (GLP-1RAs) are not yet covered by Medicare Part D, partly due to high drug costs. The Biden administration's proposal to expand Part D coverage underscores the need to assess the balance between fiscal costs and benefits to guide policy decisions.

OBJECTIVE To estimate the 10-year net fiscal impact of expanded Medicare coverage for GLP-1RAs for obesity treatment.

DESIGN, SETTING, AND PARTICIPANTS In this economic evaluation, a 10-year fiscal impact analysis was conducted between 2026 and 2035 using the validated Diabetes, Obesity, Cardiovascular Disease Microsimulation model. The base-case analysis incorporated a 10% 1-time uptake rate for eligible adults in each new cohort, 40% adherence beyond the first year, and a 10% additional price discount beyond current net prices. A 3-way sensitivity analysis was conducted with varying uptake, adherence, and additional price discounts. The model included current and future Medicare beneficiaries with body mass index (calculated as weight in kilograms divided by height in meters squared) of 30 and higher or 27 and higher with at least 1 obesity-related comorbidity. Data were analyzed from March to December 2024.

EXPOSURE GLP-1RA therapy.

MAIN OUTCOMES AND MEASURES Total Medicare drug costs for GLP-1RAs for obesity indications not covered by Medicare, long-term health care cost offsets from reduced obesity-related comorbidities, and net fiscal impact.

RESULTS Among 30 million cumulative Medicare beneficiaries (survey-weighted mean [SE] age, 64.5 [0.4] years; 54.1% female) identified as eligible for new GLP-1RAs for obesity treatment over the next 10 years, the base-case analysis estimated that 3 million would receive treatment. Medicare's total drug costs were projected at \$65.9 billion and health care cost offsets from clinical benefits at \$18.2 billion, resulting in net increased spending of \$47.7 billion. Three-way sensitivity analysis estimated that higher uptake and adherence would lead to increased health care savings from clinical benefits. However, these savings were estimated to remain less than additional spending on GLP-1RAs and to extensively increase net spending.

CONCLUSIONS AND RELEVANCE This economic evaluation estimates that expanded Medicare coverage for GLP-1RAs would increase access and reduce obesity-related comorbidities but impose substantial costs over 10 years. Even with a moderate scenario (5% uptake, 20% adherence, and 30% additional price discount), net spending was still projected to reach \$8 billion over a decade,

(continued)

Key Points

Question What is the projected 10-year fiscal impact on the Medicare program if Part D plans were to cover glucagon-like peptide-1 receptor agonists (GLP-1RAs) for obesity treatment?

Findings In this economic evaluation of 30 million cumulative Medicare beneficiaries identified as eligible for new GLP-1RAs for obesity treatment over the next 10 years, Medicare's total projected costs for drug coverage of the GLP-1RAs were \$65.9 billion. Health care savings of \$18.2 billion were estimated to result in \$47.7 billion in net increased spending.

Meaning Medicare Part D coverage of GLP-1RAs to treat obesity would lead to a substantial net increase in future Medicare spending, and policymakers should leverage a comprehensive range of strategies, including further price reductions resulting from Medicare's drug price negotiation under the Inflation Reduction Act, lower cost strategies to prevent weight regain, and reductions in spending on unnecessary care.

+ Supplemental content

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Abstract (continued)

underscoring the need for further price reductions, lower-cost strategies to prevent weight regain, and reductions in spending on low-value care.

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Introduction

The understanding of obesity has changed since 2003, and in 2013, the American Medical Association officially recognized it as a disease.¹ The treatment landscape for obesity has also undergone a considerable transformation with the development of highly effective glucagon-like peptide-1 receptor agonists (GLP-1RAs). This new class of antiobesity medications (AOMs) offers substantial clinical benefits, such as sizable weight loss and reductions in obesity-related comorbidities. Other benefits include better glycemic control, reduced recurrent cardiovascular events, improved heart failure symptoms, and alleviated obstructive sleep apnea (OSA).²⁻⁷

The AOM landscape continues to grow, with up to 16 new drugs projected to become available in the next 5 years.⁸ Despite their promise, GLP-1RAs are currently covered by Medicare only for specific indications, such as diabetes (Ozempic, approved in 2017) or cardiovascular disease (CVD; Wegovy, approved in 2024).⁹ Tirzepatide (Zepbound) was recently approved for sleep apnea by the US Food and Drug Administration (FDA) and as of January 2025 is covered by Medicare for this indication.^{10,11} This limitation stems from a historic Medicare Part D provision established in 2003, which excludes drugs labeled for weight loss.¹² To address this gap, recent legislative and policy initiatives from US Congress and the Centers for Medicare & Medicaid Services (CMS) aim to include AOM coverage under Medicare Part D and Medicaid, redefining these medications as treatments for excess body weight and weight-reduction maintenance.^{13,14}

While AOMs provide substantial clinical benefits, they are also costly. For example, GLP-1RAs have an average net cost of \$700 to \$800 per month after accounting for rebates and discounts.¹⁵ Long-term compliance also remains low, and weight regain is common following discontinuation.¹⁶

Prior studies have estimated the resulting budgetary impact, highlighting substantial financial implications.¹⁷⁻²¹ For example, the Congressional Budget Office (CBO) estimated that a bill to allow AOM coverage in Medicare would increase federal spending by \$35 billion over 9 years. In comparison, the CMS proposal would increase federal spending by \$25 billion due to expanded Part D coverage and \$15 billion due to expanded Medicaid coverage over 10 years.²⁰

However, estimating the fiscal impacts of the AOM coverage is challenging due to substantial uncertainties in determining the size of the eligible population, long-term treatment uptake and adherence rates, and potential health care cost offsets. To address these gaps, an advanced microsimulation model incorporating nationally representative data was used to provide more accurate clinical and economic estimates. Extensive sensitivity analyses addressed the uncertainty regarding treatment uptake, costs, adherence, and impact on obesity and related comorbidities.

Methods

Overview

We projected the 10-year fiscal impact of Medicare Part D coverage of GLP-1RAs (ie, semaglutide and tirzepatide) for obesity treatment using a microsimulation model. Key model parameters include the eligible population, drug uptake, treatment adherence, clinical effectiveness (ie, changes in obesity-related health care spending), and GLP-1RA costs, including potential changes in future prices (eMethods and eTables 1 and 2 in [Supplement 1](#)). Key outcomes included direct medication costs, obesity-related health savings, and net spending. All costs were inflated to 2024 US dollars using the

health care component of the Personal Consumption Expenditures Price Index.²² We did not apply discounting for future costs to be consistent with the standard practice in budget impact analyses.

This study was deemed exempt from review by the University of Chicago institutional review board due to it involving nonhuman participant research. The study adhered to the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) reporting guidelines.²³

Diabetes, Obesity, Cardiovascular Disease Microsimulation Model

The Diabetes, Obesity, Cardiovascular Disease Microsimulation model is a validated population disease simulation model that projects individual health trajectories, including the development of obesity (defined as a body mass index [BMI; calculated as weight in kilograms divided by height in meters squared] of ≥ 30), obesity-related comorbidities, long-term health events (eg, diabetes, myocardial infarction, stroke), and death (eFigure 1 in Supplement 1).²⁴ The model incorporates individual-level disease risk based on baseline demographics (eg, age, sex, race and ethnicity), dynamic changes in metabolic risk factors (eg, BMI, blood pressure, total cholesterol, smoking), and an open cohort to estimate long-term health and economic outcomes.

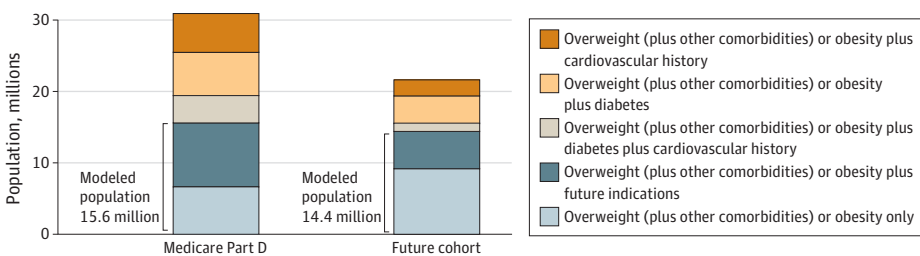
Eligible Population

Using data from the 2017 to 2020 National Health and Nutrition Examination Survey, the model included 30 million representative individuals who were current Medicare Part D beneficiaries or aged into eligibility annually (ie, ≥ 65 years old) for future cohorts and met clinical criteria for obesity treatment (ie, BMI ≥ 30 or BMI ≥ 27 with ≥ 1 obesity-related comorbidity, including hypertension, dyslipidemia, chronic kidney disease, OSA, or arthritis) (Figure 1 and eTable 3 in Supplement 1).^{25,26} Individuals with prevalent diabetes or CVD were excluded, as Medicare already provides coverage for these conditions. As dually eligible individuals comprise 17% of Medicare beneficiaries and account for 33% of Medicare spending, we included them to ensure a comprehensive estimate of the fiscal impact.^{27,28}

Uptake and Adherence

Observed GLP-1RA uptake among eligible individuals varies from 2% to 10% annually across reports.^{18,20,21,29-31} For this base-case analysis, we applied a 10% 1-time uptake rate for current and future eligible Medicare Part D beneficiaries over the next 10 years, reflecting the upward trend in GLP-1RA use. Empirical evidence suggests that adherence to GLP-1RA therapy in obesity treatment ranges from 27.2% to 73.8% after the first year.^{16,32-35} Among those who initiated a GLP-1RA therapy, we assumed 100% adherence in the first year, followed by a 40% adherence rate in subsequent years, based on clinical evidence suggesting that individuals adherent at 1 year were more likely to continue treatment.³ We assumed that individuals in each cohort who did not initiate GLP-1RA treatment initially, as well as those who discontinued treatment, would not receive GLP-1RAs in the future.

Figure 1. Prevalence of Conditions Indicated for Glucagon-Like Peptide-1 Receptor Agonists Among Medicare Part D Beneficiaries and the Future Cohort



Data are from the 2017 to 2020 National Health and Nutrition Examination Survey, including 30 million representative individuals who were current Medicare Part D beneficiaries or who aged into eligibility annually (ie, ≥ 65 years old) for the future cohort. Overweight was defined as a body mass index (calculated as weight in kilograms divided by height in meters squared) between 27 and 29.9, with at least 1 weight-related comorbidity (eg, prediabetes, hypertension, dyslipidemia, obstructive sleep apnea, or chronic kidney disease). Obesity was defined as a body mass index of 30 or greater. Future indications include chronic kidney disease, obstructive sleep apnea, or osteoarthritis.

Clinical Efficacy

Patients receiving AOMs were considered to achieve the mean weight loss and cardiometabolic benefits observed during the first 2 years of clinical trials, including improvements in body weight, systolic blood pressure, diastolic blood pressure, fasting glucose, total cholesterol, high-density lipoprotein cholesterol, and triglycerides (eTable 1 in [Supplement 1](#)).^{3,36} No additional weight loss or cardiometabolic risk factor improvements were assumed beyond the first year. The model propagated these improvements into reductions in long-term risks of diabetes and CVD events.

For individuals who discontinued treatment, weight and cardiometabolic risk factors were assumed to revert to baseline levels within a year, followed by risk factor-specific temporal trends in subsequent years.^{37,38} We assumed that benefits diminish with weight regain, reflecting the importance of sustained weight loss.

Treatment Costs

We estimated the net annual costs of semaglutide and tirzepatide at \$8412 and \$6236, respectively, reflecting a current 41% and 79% discount from list prices, respectively.¹⁵ These estimates are derived from commercial net prices reflecting manufacturer discounts and rebates to align with the broader payer landscape. To account for additional drug price discounts in the future from the Inflation Reduction Act (IRA) drug price negotiations and increased competition, we included an additional 10% discount in the base-case analysis, while evaluating additional 20% and 30% discounts in sensitivity analyses.³⁹ For example, semaglutide may be selected for Medicare price negotiation under the IRA as early as 2025, with negotiated prices potentially taking effect as early as 2027.⁴⁰⁻⁴² This year was selected because the IRA negotiation applies to active ingredients, which for semaglutide was approved for diabetes in 2017 (Ozempic), permitting potential cross-indication pricing.⁴³⁻⁴⁵ This approach reflects the earliest eligibility dates for negotiation and the potential alignment of pricing across indications. While the exact discount is uncertain, the first 10 drugs in the IRA program showed a mean 22% reduction in net spending.⁴⁵ Thus, we modeled scenarios with up to an additional 30% discount effective in 2027, based on Medicare guidance and regulatory expectations under the IRA.³⁹ For tirzepatide, we applied the same pricing discount, as IRA negotiations are expected to drive down costs and maintain its competitiveness relative to semaglutide.

Health Care Cost Offsets

We estimated health care cost offsets resulting from improved body weight and cardiometabolic risk factors, which led to the prevention of diabetes, CVD, and related complications. In addition, we incorporated BMI-mediated effects (ie, additional effects on health care costs besides other covariates, including age, sex, race and ethnicity, hypertension, diabetes, and CVD) (eTable 2 in [Supplement 1](#)).

Sensitivity Analysis

To provide a comprehensive assessment of how key factors influence the results, we performed 3-way sensitivity analyses on the impact of varying treatment uptake rates (5%-20%), additional price discounts (10%-30%), and adherence levels (20%-60%) simultaneously. We also evaluated longer-term budget impact over 20- and 30-year horizons. Data were analyzed from March to December 2024.

Results

Baseline Characteristics

The analytic sample included 15.6 million current Medicare beneficiaries (current cohort) and an additional 14.4 million individuals in the US who became eligible due to turning 65 years old and meeting obesity-treatment criteria over the next 10 years (future cohort). The survey-weighted

mean (SE) age of the analytic sample was 64.5 (0.4) years, 54.1% were female, and the initial mean (SE) BMI was 33.1 (0.3) (Table 1⁴⁶). Among the beneficiaries, prediabetes was the most common comorbidity (81.7%), followed by hypertension (75.5%) and hyperlipidemia (67.5%).

Economic Impacts

In the base-case analysis with a 10% 1-time uptake rate of GLP-1RAs (3 million current and future recipients), Medicare's drug spending on GLP-1RAs was projected to be \$65.9 billion over 10 years. Accounting for potential long-term savings due to reducing obesity-related comorbidities (\$18.2 billion), net Medicare spending would be \$47.7 billion (Table 2, Figure 2, and eFigure 2 in Supplement 1).

Three-Way Sensitivity Analysis

Over the 10-year study period, the budget impact of GLP-1RAs on Medicare Part D expenditures was evaluated under varying 1-time uptake rates (5%, 10%, and 20%), additional price discounts (10%, 20%, and 30%), and adherence levels (20%, 40%, and 60%) (Table 2 and eTables 4 and 5 and eFigure 3 in Supplement 1). Medication costs were estimated to increase with higher uptake and adherence levels, but discounts would substantially mitigate the financial impact. For example, at 5% uptake, 10-year medication costs ranged from \$17.9 billion (30% additional discount and 20% adherence) to \$43.1 billion (10% additional discount and 60% adherence). Similarly, at 20% uptake,

Table 2. Three-Way Sensitivity Analysis of 10-Year Fiscal Impact^a

		\$ Billions		
Uptake, %	Price discount, %	Adherence 20%	Adherence 40%	Adherence 60%
Medication cost				
5	10	21.3	32.9	43.1
	20	19.7	29.9	39.3
	30	17.9	27.6	35.1
10	10	42.6	65.9 (Base case)	88.5
	20	39.5	59.8	79.9
	30	35.8	53.7	71.3
20	10	87.3	131.2	171.1
	20	80.1	119.1	160.1
	30	72.9	107.1	142.9
Long-term health care cost offsets				
5	10	−9.9	−11.5	−13.3
	20	−9.9	−11.5	−13.3
	30	−9.9	−11.5	−13.3
10	10	−16.8	−18.2 (Base case)	−18.9
	20	−16.8	−18.2	−18.9
	30	−16.8	−18.2	−18.9
20	10	−37.4	−38.7	−39.5
	20	−37.4	−38.7	−39.5
	30	−37.4	−38.7	−39.5
Net spending (medication cost + long-term health care cost offsets)				
5	10	11.4	21.5	29.8
	20	9.8	18.4	26.0
	30	8.0	16.2	21.8
10	10	25.8	47.7 (Base case)	69.5
	20	22.7	41.6	61.0
	30	19.0	35.6	52.4
20	10	49.9	92.6	131.6
	20	42.7	80.5	120.7
	30	35.5	68.4	103.5

^a This table presents the 10-year fiscal impact of Medicare Part D coverage of antiobesity medication vs no antiobesity medication coverage for Medicare Part D beneficiaries and the future cohort. This analysis uses a multiway sensitivity framework that considers variations in treatment uptake, price discounts, and adherence levels. Savings (negative values) indicate reductions in budget impact, while costs (positive values) reflect additional expenses. The results underscore the potential economic implications of various treatment scenarios over a 10-year period.

Table 1. Baseline Characteristics of Current Medicare Part D Beneficiaries and the Future Cohort With Overweight or Obesity^a

Characteristic	Weighted mean (SE)		
	Total (N = 1204, representing 30 million)	Current Medicare Part D (n = 675, representing 15.6 million)	Future cohort (n = 529, representing 14.4 million)
Age, y	64.5 (0.4)	69.0 (0.6)	59.6 (0.1)
Sex, %			
Female	54.1 (1.6)	60.1 (1.6)	47.6 (2.9)
Male	45.9 (1.6)	39.9 (1.6)	52.4 (2.9)
Race and ethnicity, % ^b			
Asian and multiracial groups, non-Hispanic	5.7 (0.7)	5.5 (0.9)	6.0 (1.2)
Black, non-Hispanic	10.0 (1.6)	9.7 (1.9)	10.4 (2.1)
Hispanic	11.0 (1.3)	8.8 (1.2)	13.4 (2.0)
White, non-Hispanic	73.2 (2.5)	76.0 (3.0)	70.1 (3.6)
Weight, kg	92.3 (0.8)	89.3 (1.0)	95.5 (1.2)
BMI	33.1 (0.3)	32.8 (0.3)	33.5 (0.4)
Obesity class, %			
Overweight (BMI 27-29.9) with ≥1 comorbidity	33.5 (1.9)	33.6 (2.8)	33.3 (4.2)
Obesity I (BMI 30-34.9)	39.2 (2.6)	40.9 (2.5)	37.3 (5.3)
Obesity II (BMI 35-39.9)	16.8 (1.6)	18.0 (2.2)	15.5 (1.9)
Obesity III (BMI ≥40)	10.6 (1.5)	7.6 (1.4)	13.8 (2.5)
Blood pressure, mm Hg			
Systolic	129.4 (0.7)	130.7 (0.7)	128.0 (1.3)
Diastolic	75.3 (0.3)	73.1 (0.5)	77.7 (0.7)
Fasting blood glucose, mg/dL	105.1 (0.3)	105.8 (0.4)	104.3 (0.5)
Hemoglobin A _{1c} , %	5.6 (0.01)	5.7 (0.01)	5.6 (0.01)
Lipid levels, mg/dL			
Total cholesterol	192.7 (2.1)	186.8 (2.6)	199.1 (2.3)
High-density lipoprotein	110.9 (3.1)	54.2 (0.9)	54.2 (1.2)
Low-density lipoprotein	54.2 (0.8)	110.3 (2.3)	123.4 (2.0)
Triglycerides	116.6 (1.6)	113.9 (4.6)	107.7 (4.4)
Mean eGFR, mL/min/1.73 m ^{2c}	82.6 (0.6)	76.5 (1.0)	89.1 (1.0)
Currently smoke, %	10.3 (1.1)	6.6 (1.3)	14.4 (2.6)
Weight-related comorbidity, % ^d			
Chronic kidney disease	9.9 (1)	16.7 (2.0)	2.6 (0.9)
Hyperlipidemia	67.5 (2.2)	73.4 (2.8)	61.0 (4.4)
Hypertension	75.5 (2.2)	80.0 (2.6)	70.8 (3.7)
Metabolic syndrome	25.1 (2.1)	27.3 (2.4)	22.8 (3.4)
Obstructive sleep apnea	22.5 (2)	21.4 (2.8)	23.7 (2.6)
Osteoarthritis	28.2 (2.2)	36.1 (3.3)	19.6 (2.4)
Prediabetes	81.7 (1.7)	83.6 (2.4)	79.6 (3.0)

Abbreviations: BMI, body mass index (calculated as weight in kilograms divided by height in meters squared); eGFR, estimated glomerular filtration rate; NHANES, National Health and Nutrition Examination Survey.

SI conversion factors: To convert glucose to mmol/L, multiply by 0.0555; hemoglobin A_{1c} to proportion of total hemoglobin, multiply by 0.01; cholesterol and lipoproteins to mmol/L, multiply by 0.0259; triglycerides to mmol/L, multiply by 0.0113.

^a The study cohort was selected from the 2017 to prepandemic 2020 NHANES. The analysis was weighted using NHANES sampling strategies to ensure it accurately reflected the demographic composition of the noninstitutionalized adult population in the US. The initial cohort was identified based on self-reported Medicare status, using specific health insurance variables. To establish the Medicare-eligible cohort for each year, criteria including age, weight, and comorbidities were applied.

^b Race and ethnicity data were collected through predefined NHANES categories, with the Asian and multiracial groups, non-Hispanic classification comprising non-Hispanic Asian individuals as well as those from various racial backgrounds, including multiracial participants.

^c Calculated using CKD-EPI 2021 equation: $eGFR = 142 \times \min(\text{standardized Scr/K}, 1)^{-1.200} \times 0.993^{\text{Age}} \times 1.012$ (if female).

^d Chronic kidney disease is defined by an eGFR of 60 mL/min/1.73 m² or lower. Hyperlipidemia is defined as self-reported, receiving treatment, having low-density lipoprotein levels more than 160 mg/dL, triglyceride levels more than 150 mg/dL, or high-density lipoprotein levels below 40 mg/dL (<50 mg/dL for female patients). Hypertension is defined by self-report, receiving treatment, or having an average systolic blood pressure of 130 mm Hg or higher or diastolic blood pressure of 80 mm Hg or higher. Metabolic syndrome is defined as meeting at least 3 criteria: elevated waist circumference (≥88 cm for female patients and ≥102 cm for male patients), triglyceride levels of 150 mg/dL or higher, high-density lipoprotein levels lower than 50 mg/dL for female patients or lower than 40 mg/dL for male patients, systolic blood pressure 130 mm Hg or higher or diastolic blood pressure 85 mm Hg or higher, or fasting plasma glucose levels 100 mg/dL or higher. Prediabetes is defined by self-report, fasting plasma glucose levels between 100 and 125 mg/dL, or hemoglobin A_{1c} levels between 5.7% and 6.4%. Obstructive sleep apnea is defined as a STOP-BANG score of 5 or higher.⁴⁶ Osteoarthritis is self-reported.

medication costs ranged from \$72.9 billion (30% additional discount and 20% adherence) to \$171.1 billion (10% additional discount and 60% adherence).

Ten-year health care savings were estimated to increase at higher adherence levels. For example, at a 10% uptake, health care savings would increase from −\$16.8 billion at 20% adherence to −\$18.9 billion at 60% adherence. Higher uptake rates also resulted in more substantial estimated long-term savings, reaching the maximum savings of \$39.5 billion at 20% uptake and 60% adherence.

For net spending, at 5% uptake, estimated 10-year net spending ranged from \$8.0 billion (30% additional discount and 20% adherence) to \$29.8 billion (10% additional discount and 60% adherence). At 20% uptake, estimated net spending ranged from \$35.5 billion (30% additional discount and 20% adherence) to \$131.6 billion (10% additional discount and 60% adherence). These results highlight that medication costs dominate total expenditures, but greater adherence and uptake are associated with larger long-term health care cost offsets.

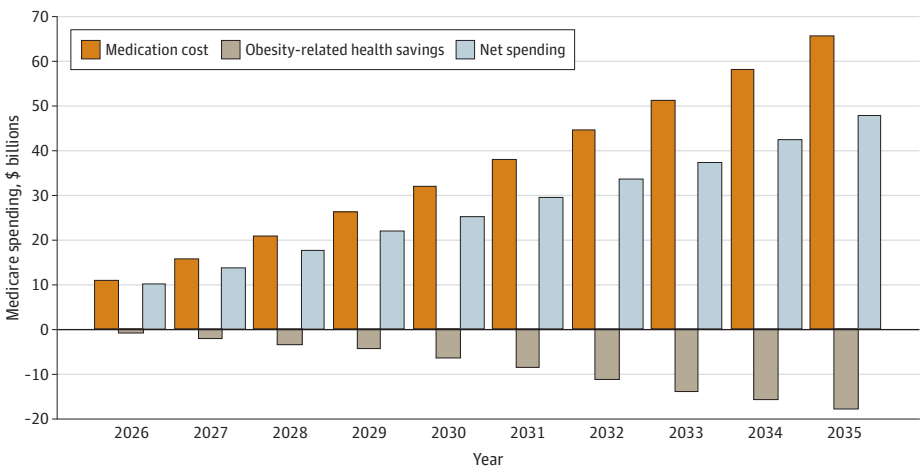
Long-Term Budget Impact Over 20- and 30-Year Horizons

Medication costs are projected to increase steadily from \$11.3 billion in 2026 to \$65.9 billion by 2035 (undiscounted, year 10), \$148.2 billion by 2045 (undiscounted, year 20), and \$266.5 billion by 2055 (undiscounted, year 30) (eTable 6 and eFigure 2 in Supplement 1). Obesity-related health care savings are also projected to rise, starting at −\$1.0 billion in 2026 and reaching −\$18.2 billion, −\$44.6 billion, and −\$89.3 billion by years 10, 20, and 30, respectively. Net spending is expected to grow from \$10.2 billion in 2026 to \$47.7 billion in 2035, \$103.6 billion in 2045, and \$177.3 billion in 2055. Overall, while health care savings are anticipated to grow substantially over time, they are consistently outpaced by the rising costs of GLP-1RAs, increasing net spending across the 30-year horizon.

Discussion

This analysis of the fiscal impact of expanded Medicare coverage for AOM is distinct because it uses updated net price estimates, considers future price changes, and estimates long-term health care savings from an individual-level health care cost prediction model. These approaches allow us to account for the dynamic, long-term impacts of weight and cardiometabolic risk factor changes on multiple comorbidities and their downstream health care costs. Together, we find that Medicare coverage of GLP-1RAs for obesity will likely result in a substantial fiscal impact, posing considerable

Figure 2. Base-Case Analysis Showing 10-Year Fiscal Impact of Glucagon-Like Peptide-1 Receptor Agonists on Medicare Expenditures for Obesity Treatment



This figure presents the projected 10-year fiscal impact of glucagon-like peptide-1 receptor agonists on Medicare expenditures for obesity treatment from 2026 to 2035. The bars represent 3 key components of fiscal impact: medication costs, obesity-related health savings, and net spending.

affordability challenges to Medicare. For example, total Medicare Part D drug spending on GLP-1RAs could reach \$65.9 billion over the next 10 years, assuming a 10% uptake and 40% adherence beyond the first year, and a 10% additional price discount starting in 2027 under the Medicare price negotiation. The costs would be offset by \$18.2 billion in obesity-related long-term health care savings, leading to net spending of \$47.7 billion over 10 years.

The 3-way sensitivity analysis showed that higher uptakes (at 20%), better adherence (at 60%), and greater additional discounts (at 30%) are estimated increased to health care savings to \$39.5 billion. Net spending, however, remains substantial (\$103.5 billion) due to the high medication cost (\$142.9 billion). Even with conservative estimates (eg, 5% uptake, 30% additional discount, and 20% adherence), net spending is projected to reach \$17.9 billion over 10 years, driven by high drug costs. Analyses on longer time horizons (20 and 30 years) consistently suggest net increases in Medicare spending.

Prior studies have provided varying estimates of the fiscal implications of expanding Medicare coverage for GLP-1RAs, reflecting differences in assumptions and methodological approaches (Table 3). Key variations include the size of the eligible population (eg, expanding covered indications and current legislation provisions), assumptions about treatment uptake and adherence, and how medication costs and savings are modeled. For instance, earlier studies, such as those by Baig et al¹⁷ and Ward et al,¹⁹ assumed broader eligibility criteria, including all Medicare beneficiaries or those without CVD-specific eligibility. These assumptions led to higher cost projections but limited consideration of current legislative provisions or net medication prices. More recent analyses, such as those by Ippolito et al,¹⁸ the CBO,²⁰ and CMS,²¹ have incorporated narrower eligibility assumptions and updated policy frameworks, resulting in lower cost estimates.^{17,18,20,21,47}

This study differs in several ways. First, we project a higher number of eligible beneficiaries under the proposed expansion of AOM coverage for obesity treatment by including those with OSA and chronic kidney disease (at the time of the analyses, GLP-1RAs were not approved for treatment for these conditions). For instance, our projected eligible population is larger than the CBO's and remains higher in future estimates (total of 30 million vs 12.5 million in 2026 and decreased to 11.9 million in 2034). The difference might stem from using National Health and Nutrition Examination Survey data that capture undiagnosed individuals who may not appear in claims records. Second, assumptions about treatment uptake differ substantially. The CBO report assumes gradual uptake, starting at 2% (0.3 million) in 2026 and increasing to 14% by 2034,²⁰ while our base case assumes 10% new 1-time uptake. Third, while both analyses consider IRA-related price reductions starting in 2027, we apply a conservative 10% additional discount compared to the CBO's 32%. Also, while the CBO report accounts for 80% of the net prices after excluding beneficiary out-of-pocket costs, this study does not explicitly model beneficiary cost sharing. Finally, our model provides granular estimates of long-term health care cost offsets by integrating individual-level demographic and health characteristics into the health care cost prediction model. Specifically, we extrapolated trial-based efficacy on weight reduction and associated cardiometabolic improvements to forecast impacts on long-term complications and costs. In contrast to the CBO report that estimated that Medicare coverage for GLP-1RAs would yield \$3.4 billion in health care savings and \$35.5 billion in net federal spending from 2026 to 2034 (12.5 million Medicare Part D beneficiaries, 2% uptake, and 35% adherence),²⁰ the present study projects substantially more considerable health care savings of \$18.2 billion and net spending of \$47.7 billion from 2026 to 2035 (10% uptake, 10% additional discount, and 40% adherence).

The coverage of GLP-1RAs has important financial implications due to clinical factors: (1) about 40% of Medicare beneficiaries are potentially eligible for treatment and (2) indefinite use of GLP-1RAs may sustain the health benefits over time.⁴⁰ Despite concerns regarding the potential fiscal impact, the Treat and Reduce Obesity Act (TROA), which aims to expand Medicare coverage to include AOMs for obesity, has made legislative progress, passing the US House of Representatives' Committee on Ways and Means with strong bipartisan support in July 2024.⁴⁸ CMS's recent reinterpretation of statutory exclusions to allow AOM coverage for obesity treatment projects that

Table 3. Comparison of Cost Estimation and Budgetary Models for Expanded Medicare Coverage of Obesity Treatments

Variable	Baig et al ¹⁷	Ward et al ¹⁹	Ippolito et al ¹⁸	Congressional Budget Office ²⁰	CMS ²¹	Hwang et al (current study)
Model	Basic cost estimation	The Future Adult Model	Budgetary analysis using Medicare claims data	ICER microsimulation model; the Future Adult Model	Medicare cost estimates	Diabetes, Obesity, Cardiovascular Disease Microsimulation model
Duration	1 y	10-30 y	10 y	2026-2034, with projections to 2044	10 y	10-30 y
Data	2020 Medicare Part D enrollment data	National survey data	Medicare claims data (2016-2019)	Medicare claims data, observational studies, and ICER and the Future Adult modeling	Medicare claims, Medicaid, pricing data	National Health and Nutrition Examination Survey
Eligible population	Adults ≥60 y with obesity	Medicare beneficiaries ≥60 y and adults ≥25 y with obesity or overweight and comorbidities	Medicare beneficiaries with obesity or overweight and comorbidities	Medicare beneficiaries with obesity or overweight and comorbidities	Medicare Part D beneficiaries with obesity only	Medicare Part D beneficiaries with obesity or overweight and comorbidities
Estimated eligible population size	19.5 Million	27.36 Million	10.9 Million	12.5 Million in 2026; 11.9 million in 2034	3.4 Million	15.6 Million in 2026; 30 million in 2035
Intervention	Semaglutide or phentermine/topiramate	Newer weight-loss treatment (not specified), reducing body weight by 20%	GLP-1RA (eg, semaglutide, tirzepatide)	GLP-1RA (eg, semaglutide, tirzepatide)	GLP-1RA (eg, semaglutide, tirzepatide)	GLP-1RA (eg, semaglutide, tirzepatide)
Uptake of treatment	1%-100%, with scenarios at 10% uptake for cost estimation	100%	5% and 10%	2% in the first year (2026), rising to 14% by 2034	10% in the first year, grows by 0.3% annually	10% Annually, with scenarios from 5%-20% annual uptake
Treatment adherence	Not explicitly discussed	100%	40%	35% in year 1; 70% discontinuation for ≥2 y	47.5% Discontinuation within 2 mo	40% Annually, with scenarios from 20%-60% annual adherence
Treatment costs	\$670/y (Generic), \$13 618/y (brand-name semaglutide)	Not modeled	\$8604/y	\$5600/y (2026) to \$4300/y (2034) after adjustments for beneficiaries' cost-sharing amounts	Specific drug prices based on pricing comparison	\$7324/y (10% additional discount under the Medicare drug price negotiation, effective in 2027)
Health care cost offsets	Not estimated	\$176 Billion in 10 y	\$970/y per patient; alternative estimates show no offsets	\$3.4 Billion (2026-2034); savings grow over time	Not estimated	\$18.2 Billion (2026-2035)
Potential fiscal impact	\$1.32-\$26.8 Billion annually (depending on uptake and drug)	\$1-\$1.3 Trillion in social benefits over 10 y	\$3.1-\$6.1 Billion annual Part D increase	\$35.5 Billion net federal spending (2026-2034)	\$24.8 Billion over 10 y	\$47.7 Billion net federal spending (2026-2035)

Abbreviations: CMS, Centers for Medicare & Medicaid Services; GLP-1RA, glucagon-like peptide-1 receptor agonist; ICER, Institute for Clinical and Economic Review.

3.3 million Medicare beneficiaries would become eligible, with an estimated 10% initiating treatment, underscoring the potential for considerable access expansion.⁴⁹

The integration of GLP-1RAs into Medicare may lead to several unintended consequences. First, the substantial financial outlay required to cover these medications may necessitate reallocating resources from other high-value treatments, potentially crowding out essential services.⁵⁰ This reallocation could undermine the quality of care provided to Medicare beneficiaries and create disparities in access to effective treatments. Second, while competitive market forces are likely to moderate drug prices, the current regulatory environment may incentivize manufacturers to set higher initial list prices for new drugs.⁵⁰ This practice, driven by the desire to offset anticipated price negotiations under the IRA, could exacerbate Medicare's financial challenges and increase the overall cost of care.

To help manage the added costs of GLP-1RAs, the Medicare program could prioritize reducing low-value care, such as spending on US Preventive Services Task Force D-recommended services, and explore alternative weight-maintenance strategies like reduced dosing, behavioral therapy, lower-cost medications, or nutrition-focused interventions after achieving maximum weight loss.⁵¹⁻⁵⁵ Since most drug spending in this analysis is driven by weight maintenance, our projections may overestimate costs if these lower-cost strategies are implemented. Empirical data demonstration projects could evaluate clinical and economic feasibility of such approaches.

Limitations

This study has some limitations. First, while we projected the budget impact of GLP-1RAs under Medicare, there is no certainty regarding critical variables such as cost, uptake, adherence rates, the eligible population, or the clinical efficacy of these drugs in clinical settings. For example, treatment uptake may differ between lower- vs higher-risk individuals, but we do not have enough data to model the differential uptake across population subgroups. Additionally, the potential influence of the IRA, under which Medicare will negotiate drug prices starting in 2027, adds further uncertainty to the future pricing of GLP-1RAs. The negotiated price will be the lesser of the current net price or a percentage of the nonfederal average manufacturer price, but the extent to which this will impact AOM prices remains unclear.

Second, our model likely underestimates health care cost offsets by excluding noncardiometabolic, obesity-related conditions, such as osteoarthritis and certain cancers, which accounted for substantial economic burdens (eg, \$403.1 billion for osteoarthritis in 2016).⁵⁶ Although our model indirectly captured these costs using the BMI's effects on health care costs, modeling these conditions explicitly could provide a more precise estimate of long-term health care savings, possibly further offsetting the fiscal impact of GLP-1RAs under Medicare.

Third, this analysis focuses on the fiscal impact of GLP-1RAs under Medicare Part D and does not account for increased medical costs related to intensive behavioral therapy or older generic AOMs included in TROA. While Medicare currently covers bariatric surgery (Part A) and intensive behavioral therapy (Part B), these options historically have shown low uptake and limited accessibility. Thus, we excluded potential substitution effects from GLP-1RAs to these alternatives due to insufficient data. If more patients opt out of bariatric surgery for GLP-1RAs, the net spending would be smaller than we estimated. However, given the low utilization of existing treatments, its impact would be negligible. Finally, we acknowledge that the modified TROA provision addressing the continuation of AOMs for individuals transitioning to Medicare represents an important area for future exploration. However, uncertainty remains regarding how many enrollees would carry over AOM use from pre-Medicare coverage and maintain therapy after enrollment. Accurate projections would require robust data on uptake and adherence rates in the pre-Medicare population, but these data are currently limited and beyond the scope of this model.

Conclusions

In this economic evaluation, the potential coverage of GLP-1RAs under Medicare represents a considerable advancement in obesity treatment, but it also poses considerable financial challenges. To ensure that AOMs remain accessible and affordable without compromising patient outcomes, a range of comprehensive policy levers are needed, such as enhancing access to underserved populations, careful assessment of long-term clinical benefits, reducing low-value care, alternative weight maintenance programs, and encouraging further price reductions through increased competition and Medicare's price negotiation program. Such concerted efforts are crucial to making obesity treatment equitable and sustainable for all Medicare beneficiaries clinically eligible for their use.

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SUPPLEMENT 1.

eMethods

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eReferences

SUPPLEMENT 2.

Data Sharing Statement