

# A 5-year financial impact of employer coverage of semaglutide for patients with obesity

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## Introduction

- Obesity affects 42.4% of US adults and is associated with increased risk of type 2 diabetes, cardiovascular disease, hypertension, dyslipidemia, and obstructive sleep apnea,<sup>1,2</sup> accounting for an estimated \$200-\$370 billion in annual direct medical costs, reduced workplace productivity, and 3–7 additional sick days per year<sup>3,4</sup>
- Wegovy (Semaglutide 2.4 mg) demonstrated 16.9% weight loss at 68 weeks (STEP 1 trial) and 20% cardiovascular risk reduction in the SELECT trial (HR 0.80; 95% CI 0.72–0.90)<sup>5,6</sup>
- Less than one-third of large employers covered GLP-1 receptor agonist prescription costs for treating obesity in 2023, driven by concerns over upfront pharmacy costs and the typically short (3- to 5-year) benefit planning time horizon<sup>7</sup>
- Most economic models use lifetime horizons without breaking down the impact on all stakeholders in the healthcare system.<sup>7</sup> This semaglutide actuarial impact model estimates the monetary impact on all payers in the healthcare system for up to 5 years

## Objective

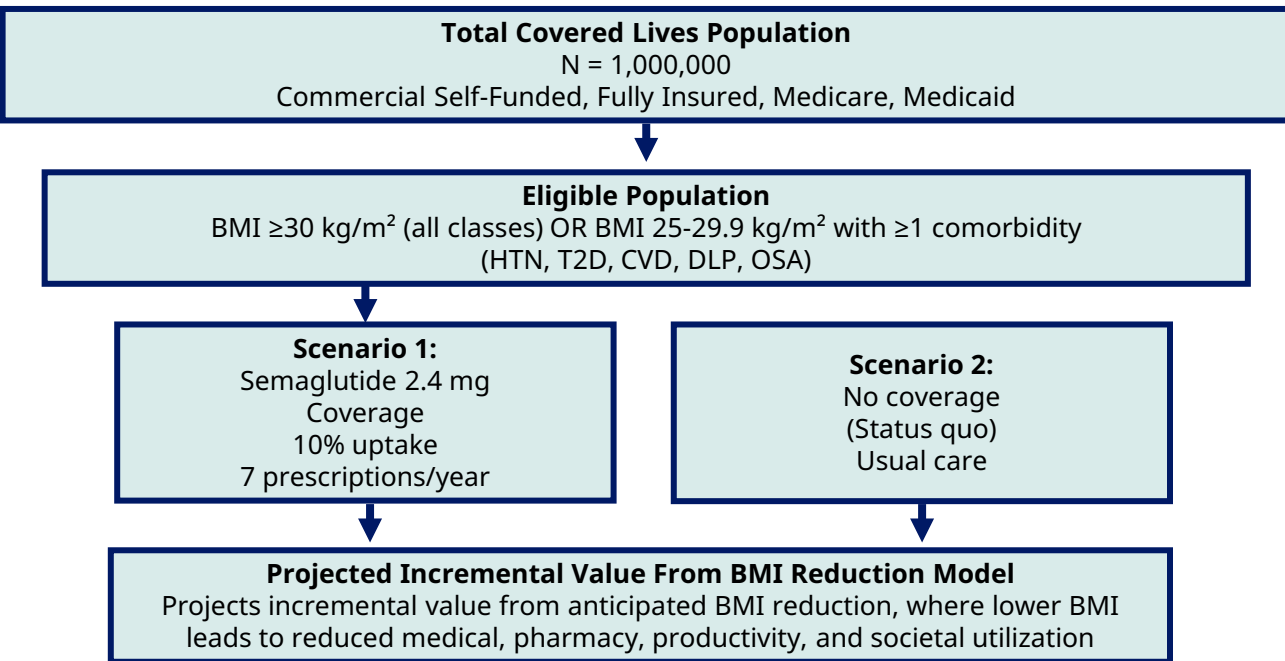
- The objective of this analysis was to estimate the up-to-5-year monetary impact of covering semaglutide 2.4 mg for patients with obesity, compared with no coverage (status quo), across multiple stakeholders' perspectives including employers, health plans, PBMs, patients, providers, and government

## Methods

- A deterministic actuarial budget impact model was developed to compare coverage of semaglutide 2.4 mg with no coverage (status quo) over a 5-year horizon (**Figure 1**)
- Epidemiology data were sourced from either published literature or from data analysis of Merative MarketScan, Medicare LDS, Medi-Span, and Komodo Health data
- Correlations between BMI levels and downstream healthcare utilization and costs were estimated using those databases. For patients treated with semaglutide, downstream disease burdens and costs were simulated using the SELECT trial efficacy of 16.9% mean body weight reduction and accounting for adherence to the regimen
  - Untreated patients were assumed to maintain the same BMI, and associated disease burden and cost consequences
- Societal costs, including productivity losses (absenteeism and presenteeism), were estimated using reported missed days of work and US average annual salary, and death rates were derived from the US Census and the literature
- Other model inputs and assumptions were
  - Semaglutide 2.4 mg cost was based on WAC of \$1,349 per 28-day prescription with a 74.09% rebate, resulting in the net drug price of \$349 per prescription (updated vs the original abstract to current day pricing)
  - BMI reduction was accounted for by drug adherence rates
  - The model classified patients into overweight, I, II, or III obesity classes, and users specified which groups were treated

## Methods, continued

**Figure 1:** Model structure and patient eligibility algorithm for 5-year actuarial budget impact analysis



| Economic Outcomes by Stakeholder Perspective                                                                                  |                                                                                                                                                   |                                                                                                      |                                                                        |                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Medical Utilization:                                                                                                          | Pharmacy Utilization:                                                                                                                             | Societal Impacts:                                                                                    | Productivity Impacts:                                                  | Stakeholders:                                                                                     |
| Cardiovascular, endocrine/metabolic, musculoskeletal, hospital inpatient, hospital outpatient, DME, and professional services | Anti-diabetics, anti-hyperlipidemics, anti-hypertensives, endocrine/hormonal agents, pain/inflammatory agents, and antineoplastic agents (cancer) | Caregiver lost workdays due to hospitalization or dialysis accompaniment, and societal cost of death | Hospitalization, dialysis, death, and dietary/behavioral/other factors | • Employers<br>• Health Plans<br>• PBMs<br>• Patients<br>• Providers<br>• Government<br>• Society |

BMI = body mass index; CVD = cardiovascular disease; DLP = dyslipidemia; DME = durable medical equipment; HTN = hypertension; OSA = obstructive sleep apnea; PBM = pharmacy benefit manager; T2D = type 2 diabetes

## Model Inputs

- Treated population
  - 1,000,000 population, of whom 65% are eligible for obesity medication
  - 20% overweight with 1 comorbidity, 25% obesity class I, 11% obesity class II, 9% obesity class III
  - 38% self-funded, 22% commercial fully insured, 16% Medicare, and 24% Medicaid
- Time horizon: 5 years
- Payer types: commercial (self-funded & fully insured), Medicare, and Medicaid
- Semaglutide treatment
  - Compliance: 7 prescriptions per year
  - WAC price: \$1,349
  - Rebate rate: 74.09%
    - Rebate rate was chosen to align the net price with the publicly available cash price of \$349
  - Copay: \$25 for commercial, \$50 for Medicare, and \$4 for Medicaid

## Results

### Stakeholder outcomes

- Coverage of semaglutide 2.4 mg resulted in cost saving for PBMs, employers, health plans, and government payers (**Table 1**)
  - PBMs benefited the most with a 2.0:1.0 ROI: covering semaglutide cost PBMs \$0.57 PMPM but yielded a return of \$1.13 PMPM due to the avoided medication expenses for obesity-related comorbidities
  - Employers paid \$5.28 PMPM for semaglutide coverage (\$1.92 for Rx and \$3.36 for medical) but yielded a return of \$8.21 PMPM (\$2.62 for Rx, \$4.77 for medical, and \$0.82 for productivity), due to reduced obesity-related disease burdens and associated medication and avoided productivity losses
- Although patients had a net loss (\$8.61 PMPM) due to the semaglutide copay, the improved quality of life was not converted to monetary values and the avoided obesity consequences were attributed to health plans. Providers were almost breakeven in the simulation
- Overall, at a net price of \$349 (after rebate) coverage of semaglutide 2.4 mg provided a favorable return of approximately 1.0:1.0 to the total system over a 5-year horizon

**Table 1:** 5-year budget impact and return on investment by stakeholder

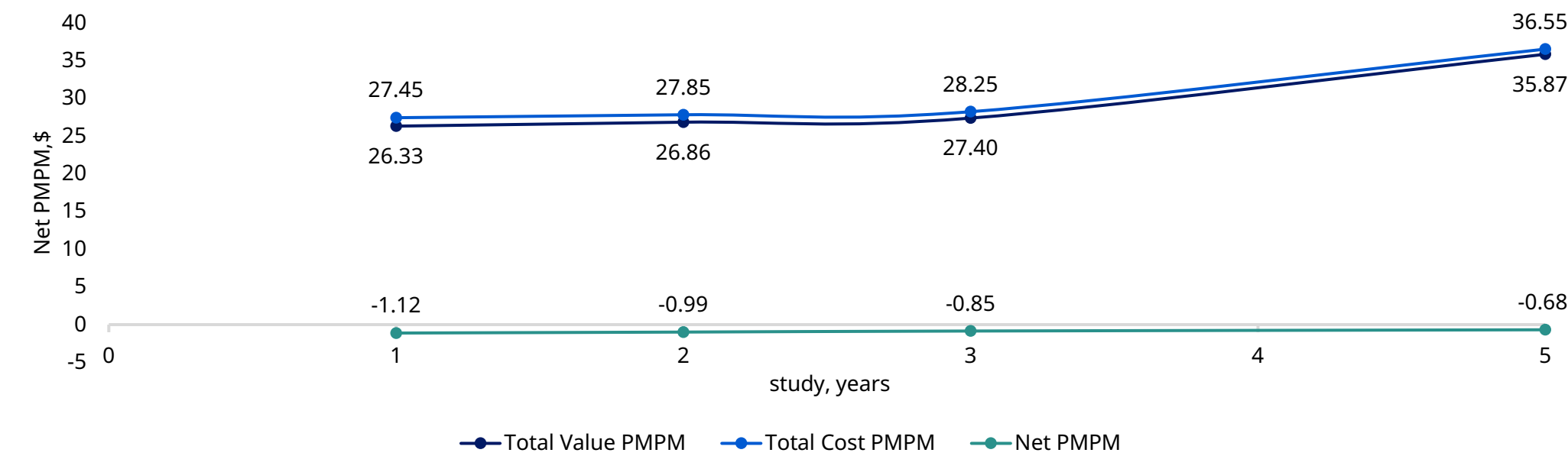
| Incremental Value, PMPM |          |              |          | Stakeholder, ROI | Incremental Cost, PMPM |          |              |          | Net (Value - Cost) |
|-------------------------|----------|--------------|----------|------------------|------------------------|----------|--------------|----------|--------------------|
| Prescription            | Medical  | Productivity | Societal |                  | Prescription           | Medical  | Productivity | Societal |                    |
| -                       | -        | -            | \$ 0.51  | Society          | ROI Fav.               | -        | -            | -        | \$ 0.51            |
| \$ 1.91                 | \$ 1.84  | -            | -        | Government       | 1.2 : 1.0              | \$ 2.28  | \$ 0.76      | -        | \$ 0.72            |
| \$ 3.51                 | -        | -            | -        | Providers        | 0.9 : 1.0              | \$ 3.91  | -            | -        | - \$ 0.41          |
| \$ 2.62                 | \$ 4.77  | \$ 0.82      | -        | Employers        | 1.6 : 1.0              | \$ 1.92  | \$ 3.36      | -        | \$ 2.93            |
| \$ 6.24                 | \$ 6.58  | -            | -        | Health Plans     | 1.4 : 1.0              | \$ 7.86  | \$ 1.36      | -        | \$ 3.61            |
| \$ 1.13                 | -        | -            | -        | PBMs             | 2.0 : 1.0              | \$ 0.57  | -            | -        | \$ 0.56            |
| \$ 3.09                 | \$ 2.60  | \$ 0.24      | -        | Patients         | 0.4 : 1.0              | \$ 13.90 | \$ 0.64      | -        | - \$ 8.61          |
| \$ 18.50                | \$ 15.79 | \$ 1.06      | \$ 0.51  | Total            | 1.0 : 1.0              | \$ 30.44 | \$ 6.11      | -        | - \$ 0.68          |

Results reported as PMPM values over a 5-year analytic period. Value columns represent economic benefits (medical cost offsets, productivity gains, pharmacy rebate value, societal value). Cost columns represent incremental expenditures. Values >1.0 indicate value exceeded cost. (-) indicates component not applicable to stakeholder.

### Accumulation of economic value over time

- For the total system perspective, the net economic value evolved over the 5-year horizon (**Figure 2**)
  - The gap between costs and value narrowed over 3 years as medical and productivity values accumulated to offset the costs
  - The slight widening in Year 5 reflects pharmacy cost trends outpacing value accumulation

**Figure 2:** Change in incremental per-member-per-month costs and value over 5-year horizon



Note: Model outputs were calculated for Years 1, 2, 3, and 5. Total Value includes pharmacy offsets, medical cost savings, productivity value, and societal value. Total Cost includes incremental pharmacy and medical costs.

### ROI by BMI class and comorbidity burden

- Patients with severe obesity benefited more from semaglutide treatment than patients with lower BMI classifications
- ROI ranged from 0.8:1.0 for patients with overweight and no comorbidities to 7.3:1.0 for patients with class III obesity and ≥5 comorbidities (**Table 2**)

**Table 2:** ROI by BMI class and comorbidity count

| Comorbidity Count | ROI Value by BMI Class   |                       |                        |                     |
|-------------------|--------------------------|-----------------------|------------------------|---------------------|
|                   | Overweight (BMI 25-29.9) | Class I (BMI 30-34.9) | Class II (BMI 35-39.9) | Class III (BMI >40) |
| 5+                | 4.4                      | 5.6                   | 6.4                    | 7.3                 |
| 4+                | 3.0                      | 3.9                   | 4.4                    | 5.0                 |
| 3+                | 2.2                      | 2.8                   | 3.2                    | 3.6                 |
| 2+                | 1.7                      | 2.1                   | 2.3                    | 2.6                 |
| 1+                | 1.3                      | 1.6                   | 1.8                    | 2.0                 |
| 0+                | 0.8                      | 0.9                   | 0.9                    | 1.0                 |

Values represent modeled individual-level ROI, calculated as the ratio of incremental economic value to incremental cost for semaglutide 2.4 mg coverage vs no coverage. ROI increases with higher comorbidity counts and BMI classes, with the greatest economic value observed among individuals with class III obesity and ≥5 comorbidities.

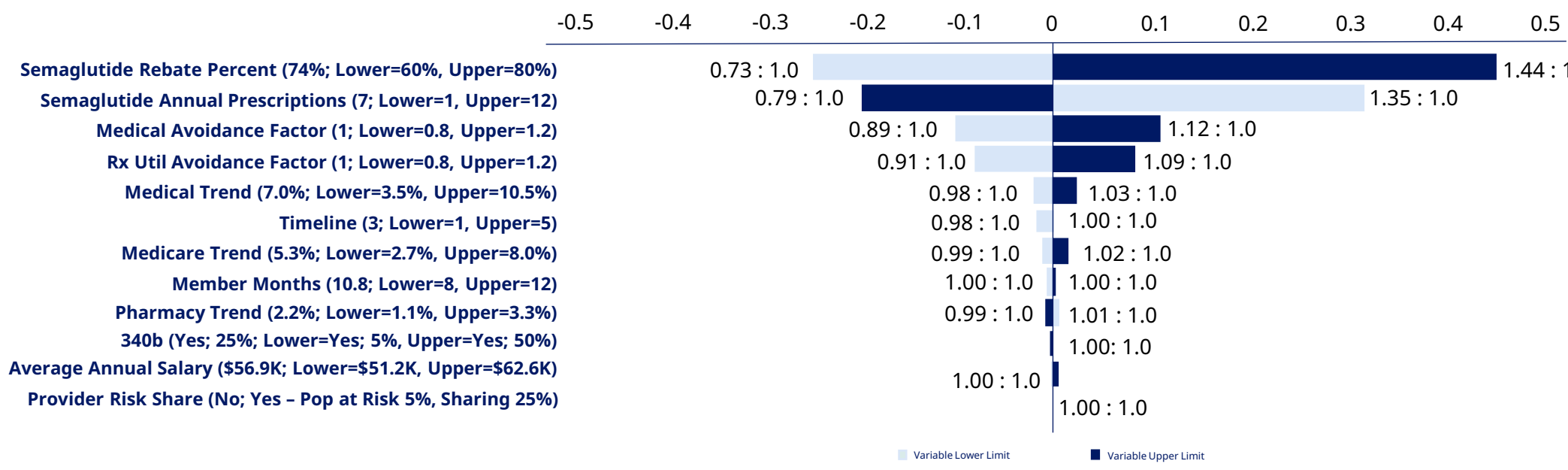
## Limitations

- The deterministic model is not designed to handle probabilistic sensitivity analysis to characterize parameter uncertainty
- The 5-year modeling horizon may not capture longer-term clinical and economic benefits, which often take time to accumulate
- Medical and prescription drug cost offsets were derived from Year 1 data and trended forward over the 5-year period; independently calculated cost offsets for Years 1 through 5 were not included in this model
- Comorbidity risk reductions were based on generalized BMI-disease associations rather than semaglutide-specific outcomes
- Rebate (74.09%) and uptake (10%) assumptions reflect current market estimates (Q1 2026) but may vary across employer settings over time

## Conclusion

- Coverage of semaglutide 2.4 mg in the healthcare system was associated with favorable 5-year ROIs for PBMs (2.0:1.0), employers (1.6:1.0), health plans (1.4:1.0), and government payers (1.2:1.0)
  - Medical cost offsets and productivity gains were the major drivers of cost savings
- Actuarial modeling provides a framework that can directly inform coverage and benefit design decisions for all stakeholders in the healthcare system when considering coverage of semaglutide 2.4 mg
- A one-way sensitivity analysis revealed that the top 3 factors influencing the results were “rebate rates,” “drug compliance,” and “medical avoidance factor” (**Figure 3**)

**Figure 3:** One-way sensitivity analysis of the overall ROI over a 5-year period



Parenteral values for each parameter indicate base case assumption, lower bound tested, and upper bound tested, respectively (e.g., “74%; Lower=60%, Upper=80%” indicates a base case rebate of 74% tested across a range of 60% to 80%). ROI values at bar endpoints represent model output under each scenario. ROI >1.0 indicates net savings; ROI <1.0 indicates net cost. Employer ROI remained favorable across all tested scenarios

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Abbreviations: BMI, body mass index; GLP-1, glucagon-like peptide-1; LDS, limited data set; PBM, pharmacy benefit manager; PMPM, per-member-per-month; ROI, return on investment; WAC, wholesale acquisition cost

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GW, NS, and JL are the actuaries responsible for this model. GW and JL are Fellows in the Society of Actuaries and NS is an Associate in the Society of Actuaries. All are Members of the American Academy of Actuaries and are qualified to issue this model.

This model includes many assumptions developed from outside data sources. These sources have been reviewed for reasonableness and internal consistency and are appropriate for use in this model without any known significant limitations or defects. These assumptions have not been audited or independently verified. This model includes projections of future experience based on reasonable assumptions. The assumptions used in the modeling are reasonable individually and in the aggregate. Results will vary from these projections based on emergence of actual experience.

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