

HPC DATAPOINTS

Blockbuster GLP-1 Weight-Loss Drugs in Massachusetts

INTRODUCTION

Glucagon-like peptide 1 (GLP-1) agonists are an increasingly popular class of medications used to treat type 2 diabetes and obesity. GLP-1 is a hormone produced in the small intestine and colon that, among other functions, stimulates the secretion of insulin, delays gastric emptying, and suppresses hunger. GLP-1 medications, including those with the active ingredients semaglutide (Ozempic, Wegovy) and liraglutide (Victoza, Saxenda), work by mimicking the naturally occurring hormone.

In 2005, the U.S. Food and Drug Administration (FDA) approved the first GLP-1 agonist, indicated for the treatment of type 2 diabetes. Since then, the FDA has approved several additional GLP-1s, including the first GLP-1 indicated specifically for weight management, Saxenda, in 2014. Other GLP-1s, particularly semaglutide medications indicated for type 2 diabetes, have been prescribed “off-label” for weight loss, though the FDA approved Wegovy – a semaglutide indicated for weight management – in 2021.

Compared to other classes of weight loss drugs approved in the past, GLP-1 medications have demonstrated stronger efficacy. In particular, newer drugs with the active ingredients [semaglutide](#) (Ozempic, Wegovy) and [tirzepatide](#) (Mounjaro, Zepbound) have resulted in an average weight reduction of 10% to 20% in clinical trials. This issue of HPC DataPoints explores trends in GLP-1 prescriptions in Massachusetts through September 2023 and examines the use and spending impacts of these drugs in the Commonwealth.

This is a printable version of DataPoints. The online version features interactive graphics that show additional information, and is available on the HPC’s website at masshpc.gov/publications/datapoints.

PATIENT EXPERIENCE WITH GLP-1 MEDICATIONS

Most GLP-1s are administered through self-injection, daily or weekly, depending on the medication. Patients typically initiate the drug at a low dose and slowly advance to the targeted dose over the course of several weeks.

Reports of patient experience with these medications have been [mixed](#). Many patients report positive and even “[life-changing](#)” results. Some patients have little or no negative reaction to these medications, while others experience [side effects](#) ranging from nausea and digestive problems (including stomach paralysis) to muscle loss and heart palpitations. Still, others find the side effects unmanageable or find the medications to be ineffective. [One analysis](#) using national commercial data found that 30% of patients stopped treatment within four weeks, before reaching the targeted dose. [A separate analysis](#) of commercially-insured patients found that only 32% patients taking GLP-1 medications were still taking the medication one year later. Medication adherence is important as patients are generally expected to stay on the drug to achieve and sustain weight loss.

Emerging evidence on differences in use by population raises questions about unequal access and adherence. One [media report](#) suggested that uptake may be higher among wealthier and healthier communities. [A May 2024 analysis](#) based on nationally representative commercial data found that people living in underserved regions were less likely to complete 12 weeks of treatment (the minimal time period associated with clinically meaningful weight loss) than those living in more well-resourced areas. The same analysis also found that individuals with monthly cost-sharing less than \$60 were significantly more likely to continue treatment than those paying more than \$60 per month.

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NATIONAL UTILIZATION AND SPENDING TRENDS

[National research using electronic health records](#) found that 1.7% of U.S. patients who had a health care visit in 2023 were prescribed a semaglutide medication, representing a 40-fold increase over the last five years. In the second quarter of 2023 alone, net sales for GLP-1 medications (accounting for rebates) in the U.S. totaled **\$5.9 billion**. Notably, the list prices of these drugs are [significantly lower in peer countries](#). For example, the list price for a one-month supply of Ozempic in 2023 was priced at \$936 in the U.S., but was \$169 in Japan, \$147 in Canada, and \$83 in France.¹ [A March 2024 study](#) estimated that semaglutide could be made for less than \$5 per month, including manufacturing cost plus a profit margin.

METHODS FOR ANALYZING RECENT TRENDS IN GLP-1 IN MASSACHUSETTS

Using medical and pharmacy data from the Center for Health Information and Analysis’ Massachusetts Enhanced All-Payer Claims Database (E-APCD), the HPC examined trends in GLP-1 prescriptions and spending in Massachusetts between January 2018 and September 2023.² One important limitation of this analysis is that it only identifies GLP-1 medications billed to commercial insurance and, consequently, cannot account for people who are paying for GLP-1 drugs entirely out of pocket, whether prescribed by traditional providers or through direct to consumer online telehealth providers. Therefore, these utilization figures may be underestimates.

Estimates of total spending and total number of prescriptions in Massachusetts reflect extrapolation from the data sample available in the E-APCD to the full commercially-insured population in Massachusetts.

Prescriptions for the following GLP-1 medications were included in this study, in order of FDA approval: Victoza (Novo Nordisk), Saxenda (Novo Nordisk), Trulicity (Eli Lilly), Ozempic (Novo Nordisk), Rybelsus (Novo Nordisk), Wegovy (Novo Nordisk), and Mounjaro (Eli Lilly).³

GLP-1 medications included by active ingredient and chronic weight management or diabetes indication

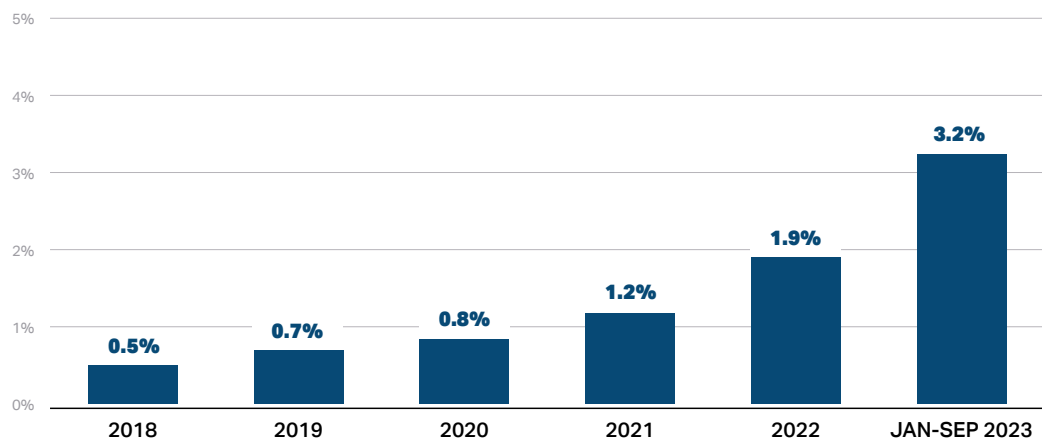
ACTIVE INGREDIENT	BRAND NAME	MANUFACTURER	INDICATION	FDA APPROVAL	ROUTE OF ADMINISTRATION
Tirzepatide	Mounjaro	Eli Lilly	Type 2 diabetes	May 2022	Injection, once weekly
	Wegovy	Novo Nordisk	Chronic weight management	July 2021	Injection, once weekly
Semaglutide	Rybelsus	Novo Nordisk	Type 2 diabetes	September 2019	Oral tablet, once per day
	Ozempic	Novo Nordisk	Type 2 diabetes	December 2017	Injection, once weekly
Dulaglutide	Trulicity	Eli Lilly	Type 2 diabetes	September 2014	Injection, once weekly
Liraglutide	Saxenda	Novo Nordisk	Chronic weight management	December 2014	Injection, once daily
	Victoza	Novo Nordisk	Type 2 diabetes	January 2010	Injection, once daily

USE AND SPENDING IMPACTS OF GLP-1 DRUGS IN MASSACHUSETTS

Commercial members prescribed GLP-1 drugs

Between January 2018 and September 2023, the proportion of commercial members who were prescribed a GLP-1 medication increased dramatically. In the first nine months of 2023, 3.2% of Massachusetts commercial members were prescribed a GLP-1 drug, a seven-fold increase from 2018, when 0.5% of members were prescribed one of these medications. Of those members prescribed a GLP-1 medication between January and September 2023, almost two-thirds were prescribed a semaglutide drug, such as Ozempic, Rybelsus, or Wegovy.

Percent of commercial members who were prescribed a GLP-1 drug that year, January 2018 to September 2023



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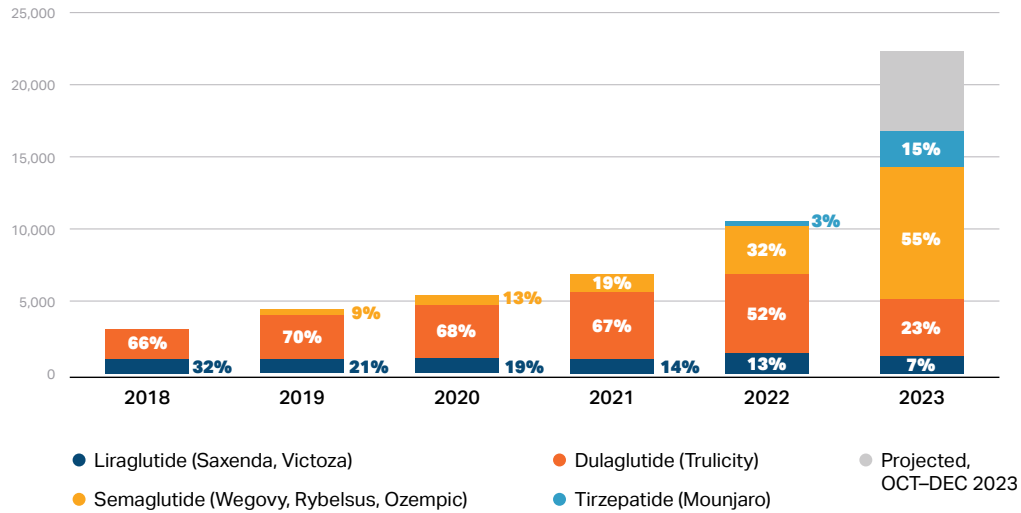
Commercial use and spending on GLP-1 drugs

The use of GLP-1 drugs among commercial members has increased exponentially in Massachusetts with the introduction of new products, such as Wegovy and Mounjaro. The number of GLP-1 prescriptions increased from approximately 3,000 to 22,000 per 100,000 commercial members from 2018 to 2023, a more than seven-fold increase. Including a projected number of prescriptions between October and December 2023, there were an estimated 313,000 GLP-1 prescriptions among commercially-insured members in Massachusetts in 2023.

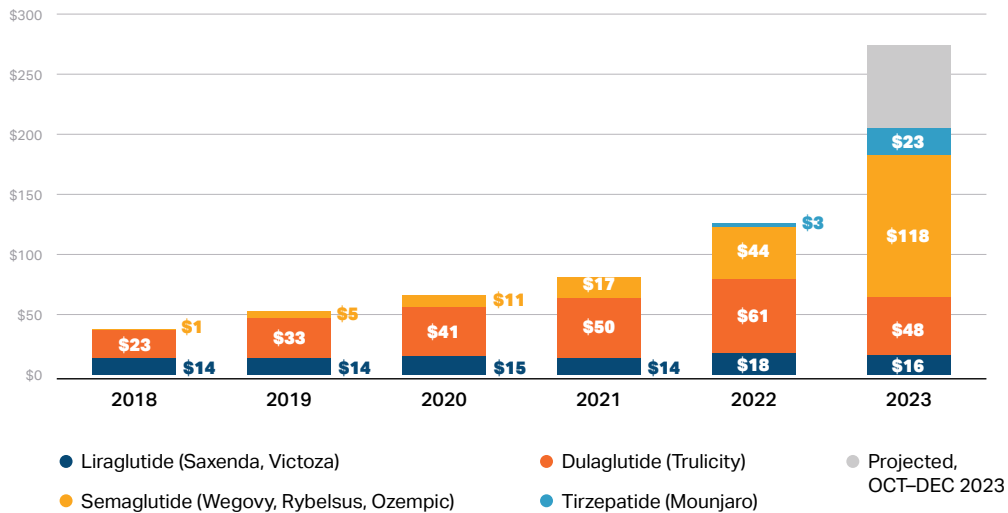
The use of GLP-1 drugs for weight loss is a large driver of the increase in prescriptions for GLP-1 medications. Between 2018 and the first nine months of 2023, the composition of GLP-1 prescriptions shifted toward products indicated for chronic weight loss, increasing from 6% of GLP-1 prescriptions in 2018 to 40% in the first nine months of 2023. The share of patients primarily using GLP-1 drugs for weight loss is likely even higher due to newer products indicated for type 2 diabetes being prescribed “off-label” for weight loss (such as Ozempic).

The increase in GLP-1 prescriptions resulted in an increase in spending on these medications. In 2023, total commercial spending (gross) on GLP-1 drugs in Massachusetts is projected to surpass \$270 million, more than double the spending in 2022, which was nearly \$125 million. Spending on these medications accounts for a notable proportion of pharmacy spending overall: in 2022 (the latest full year of data), spending on GLP-1 drugs among commercially-insured members accounted for 5% of pharmacy spending among commercially-insured members overall.

Number of prescriptions for selected GLP-1 medications per 100,000 commercial members by therapeutic class and year, 2018 to 2023



Commercial spending (in millions) on selected GLP-1 drugs by brand name and year, 2018 to 2023



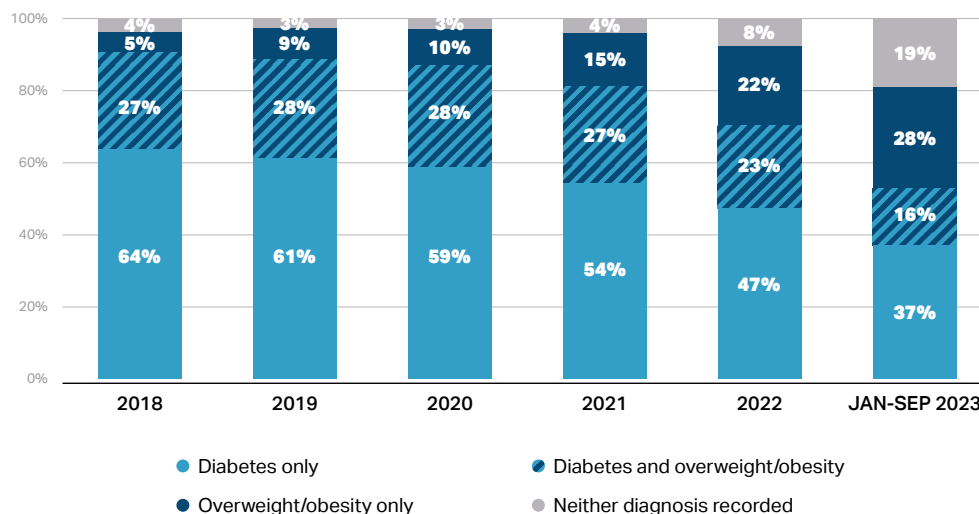
In 2023, total commercial spending (gross) on GLP-1 drugs in Massachusetts is projected to surpass **\$270 million**, more than **double the spending** in 2022.

Characteristics of commercial members prescribed GLP-1 drugs

As noted above, while most GLP-1 medications in this study are indicated for the treatment of diabetes, Wegovy and Saxenda are indicated for chronic weight management, and drugs could also be prescribed “off-label” for weight loss. The HPC analyzed whether patients prescribed a GLP-1 medication had a previous or current diagnosis of diabetes, overweight/obesity, both, or neither. For each patient, the look-back period was from January 2018 to the date the prescription was filled. Between January 2018 and September 2023, there was a large shift in the distribution of commercial members with a previous diagnosis of diabetes and/or overweight/obesity. By the first nine months of 2023, approximately half of members prescribed a GLP-1 had a previous diagnosis of diabetes, a significant shift from 2018 when over 90% of members had a history of that diagnosis.

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Percent of commercial members prescribed a GLP-1 drug by previous diagnosis of diabetes and/or overweight/obesity, January 2018 to September 2023



Characteristics of commercial members differed by those prescribed a medication with an approved indication for weight management versus those prescribed a medication approved for diabetes. Notably, commercial members prescribed Wegovy and Saxenda (indicated for weight loss) were more likely to be younger, female, living in higher income areas, living in metro areas, and with a prior diagnosis of overweight/obesity. A smaller proportion of these members had a previous diagnosis of diabetes, compared to members prescribed one of the other GLP-1 medications indicated for diabetes.

Characteristics of commercial members by GLP-1 medication prescribed, January to September 2023

ACTIVE INGREDIENT	BRAND NAME	MANUFACTURER	AVERAGE AGE	FEMALE	LIVES IN METRO AREA	PRIOR DIAGNOSIS OF DIABETES	PRIOR DIAGNOSIS OF OVERWEIGHT/OBESITY	LIVES IN THE HIGHEST INCOME QUINTILE
Tirzepatide	Mounjaro	Eli Lilly	49	56%	35%	64%	32%	25%
	Wegovy	Novo Nordisk	46	69%	41%	13%	63%	27%
Semaglutide	Rybelsus	Novo Nordisk	52	40%	36%	82%	17%	24%
	Ozempic	Novo Nordisk	50	51%	34%	74%	27%	22%
Dulaglutide	Trulicity	Eli Lilly	53	38%	31%	91%	21%	17%
Liraglutide	Saxenda	Novo Nordisk	45	72%	39%	16%	70%	26%
	Victoza	Novo Nordisk	54	53%	37%	85%	27%	16%

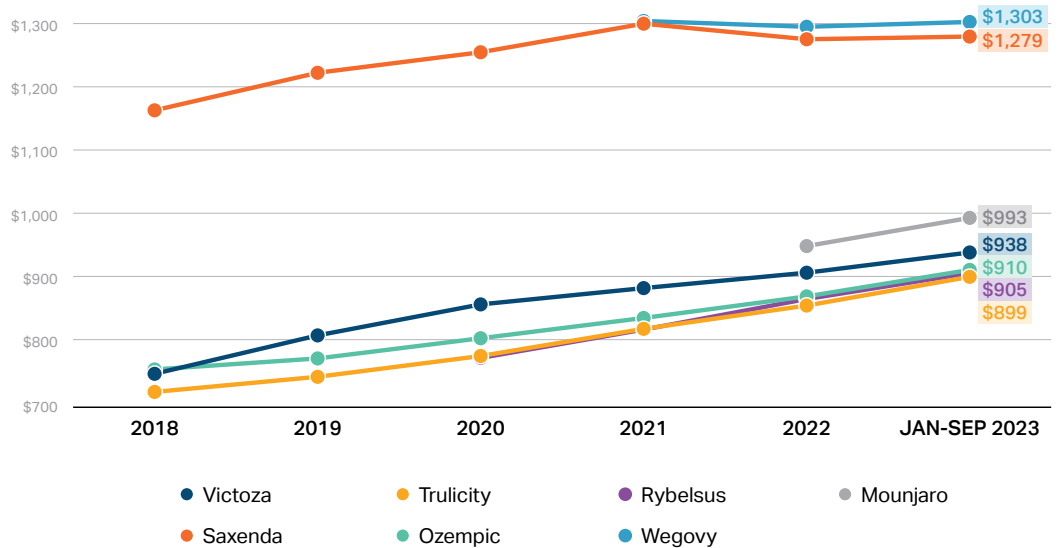
Commercial prices and cost-sharing for GLP-1 drugs

To further examine the potential cost impacts of the increasing uptake of GLP-1 medications, average commercial prices (gross) were evaluated for one-month supplies of each of these drugs. Average gross commercial prices were highest for drugs indicated for weight loss (Wegovy and Saxenda), at \$1,303 and \$1,279 per one-month supply during the first nine months of 2023, respectively. Of all GLP-1

medications, Trulicity had the lowest price, at \$899 per one-month supply during the same time period. However, all drugs increased in price between January 2018 and September 2023. Between January 2018 and September 2023, the average gross price for a one-month supply of medication increased the most for Victoza (25.7%), followed by Trulicity (25.4%) and Ozempic (20.9%).

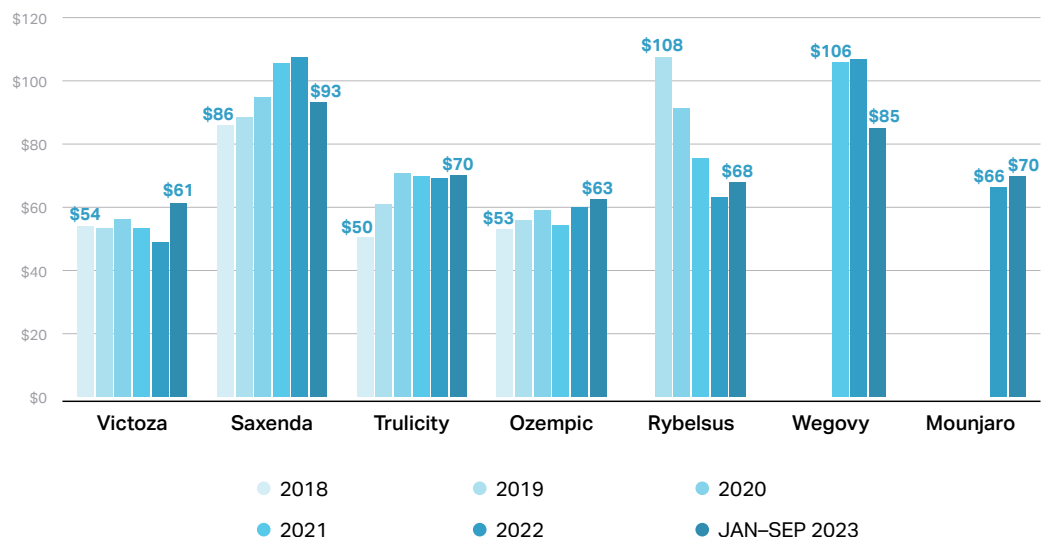
Average gross commercial prices were highest for drugs indicated for weight loss (Wegovy and Saxenda), at **\$1,303 and \$1,279 per one-month supply** during the first nine months of 2023, respectively.

Average commercial price (gross) for a one-month supply of GLP-1 medication by brand, January 2018 to September 2023



The HPC also examined patient cost sharing for these chronic medications. Average cost sharing for a one-month supply of GLP-1 medications ranged from \$61 for Victoza to \$93 for Saxenda during the first nine months of 2023. Cost sharing was highest for drugs indicated for weight loss (Wegovy and Saxenda). In addition, average cost sharing for one-month supplies of GLP-1 medications varied by brand and over time, presumably reflecting changes in plan design during the study period (e.g., changes in drug tiering).

Average commercial cost-sharing for a one-month supply of GLP-1 medication by brand, January 2018 to September 2023



The Massachusetts Health Policy Commission (HPC)

is an independent state agency working to improve the affordability of health care for all residents of the Commonwealth. Through data-driven analysis, actionable policy insights, public accountability, and innovative investments, the HPC seeks to improve health care delivery, lower costs, and reduce health disparities.

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VARIATION IN PAYER COVERAGE FOR WEIGHT LOSS MEDICATIONS

While GLP-1 medications for the treatment of type 2 diabetes are generally covered by insurers, coverage for weight loss purposes varies considerably by payer. For [commercial payers](#), coverage depends on the payer and plan. Eligibility is generally defined based on BMI and/or related comorbidities, in line with indications and usage guidance on the FDA label. Plans typically require prior authorization to demonstrate medical necessity, and some plans require patients to engage in diet and exercise and/or enrollment in formal behavioral modification programs in order to obtain coverage. Less common are pharmacological step therapy requirements (i.e., trying other medications first). In addition, plans generally approve coverage on a term-limited basis ranging from several months to two years, with documented weight loss required for continued coverage.

Among public payers, [MassHealth](#) began covering weight loss drugs for eligible patients on January 1, 2024. [Medicare Part D plans](#) are currently prohibited by law from covering drugs for weight loss purposes; however, after the [FDA approved Wegovy for a new cardiovascular indication](#) in March 2024, the Centers for Medicare & Medicaid Services (CMS) [announced](#) that Part D plans can now cover Wegovy for this new indication.

FUTURE OUTLOOK

The landscape for GLP-1 medications will continue to evolve in the coming years. In Massachusetts, [more than 1.5 million people](#) have obesity, representing a significant pool of potential patients. Utilization of these drugs will almost certainly increase, as manufacturers ramp up production in response to shortages and seek new indications for approval. [Dozens](#) of clinical trials are underway that explore the use of GLP-1 agonists for other conditions, such as liver disease, kidney disease, alcohol use disorders, polycystic ovary syndrome, sleep apnea, and [Alzheimer's](#).

Some advocates, including patient organizations and medical professional societies such as the [American Medical Association](#), have called on payers to expand coverage and access. Federal legislation has also been [proposed](#) to allow Medicare to cover weight loss drugs as well as other therapy options for the treatment of obesity (e.g., counseling with a dietitian). At the same time, concerns regarding spending will likely escalate. Citing projected GLP-1 spending, U.S. Senator Bernie Sanders warned in a [May 2024 report](#) that “the outrageously high prices of these drugs have the potential to bankrupt our entire health care system.” [An employer survey](#) found that 43% of employers plan to cover weight loss drugs in 2024, doubling the share of employers reporting such coverage in 2023 (25%). However, citing cost concerns, [some employers and health plans](#) have ended coverage while others experiment with utilization management tools. Public payer coverage of GLP-1 drugs, especially for weight loss, raises significant budgetary concerns. [Modeling](#) suggests that if Medicare began covering these drugs for weight loss, Medicare Part D spending would rise \$26.8 billion annually (an 18% increase over current spending) if 10% of beneficiaries with obesity used Wegovy. If Medicare selects any of these products for price negotiation, the program [could begin negotiating prices](#) as early as 2025.

More research is needed on GLP-1 medications' long-term benefits and the potential effects on other health care spending, to inform policies that balance access, affordability, and financial sustainability. While weight loss is associated with a range of health benefits, [no empirical evidence to date](#) directly links the use of GLP-1 medications to reductions in other health care spending. [Research](#) modeling the impact of GLP-1 drugs for weight loss estimates low cost-effectiveness; notably, this research is based on the current price of these medications in the U.S., and the calculation could change significantly if the pricing of these medications were to change.

Endnotes

- 1 List prices do not account for rebates, which are offered by drug manufacturers in exchange for favorable placement on a health plan's drug formulary. Rebates are generally paid to the health plan after a drug has been dispensed at a pharmacy and thus effectively reduce the price of the drug paid by the payer. However, patient cost sharing related to deductibles or coinsurance is frequently based on the list price of the drug, rather than the net price of a drug after rebates. Drug-specific rebate information is considered proprietary, but national estimates suggest significant rebates for GLP-1 drugs. For example, [a congressional report](#) noted the net price of Wegovy is roughly 60% of its list price.
- 2 The population is commercially-insured members aged 18 to 64 years of age with 12 months of medical and pharmacy coverage that year (nine months in 2023). Prescriptions for GLP-1 medications were identified using prescription claims data using IBM Micromedex® RED BOOK® ("RED BOOK") therapeutic class codes and product names. Previous diagnosis of diabetes and/or overweight/obesity were identified using medical claims data using E-APCD Flexible Analytics Clinical Condition codes. Members with ConnectorCare, subsidized commercial coverage, or non-Anthem indemnity plans were excluded. Members with GIC commercial coverage are not included due to unavailability of pharmacy claims information in the data source. In 2022, 23.4% of commercial members were missing a zip code in the data and therefore were not included in the geographic or income analyses. Where shown, average commercial prices (gross) exclude prescriptions for commercial members covered by Blue Cross Blue Shield of Massachusetts.
- 3 A tirzepatide-based product indicated for chronic weight management, Zepbound, was approved by the FDA in November 2023 and not included in this analysis.