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Utilization of and gross spending on anti-obesity GLP-1 receptor agonists in state Medicaid programs, 2021 to 2026: a brand-level analysis of State Drug Utilization Data

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Research Article

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Abstract

Glucagon-like peptide-1 (GLP-1) receptor agonists marketed for chronic weight management are an optional Medicaid benefit that most states have not covered, but indications approved in 2024 and 2025 for cardiovascular risk reduction, obstructive sleep apnea, and steatohepatitis fall outside the statutory weight-loss exclusion. Because the leading molecules carry separate brand names and National Drug Codes (NDCs) for obesity and for diabetes, molecule-level data cannot isolate use of the obesity-indicated products. Using Centers for Medicare & Medicaid Services State Drug Utilization Data, we built a state by quarter by brand panel for the 50 states, the District of Columbia, and Puerto Rico from 2021 through the first quarter of 2026. Wegovy, Zepbound, Saxenda, weight-management liraglutide generics, and orforglipron were identified by NDC; diabetes-indicated brands were excluded. Outcomes were prescriptions, gross reimbursement before rebates, and the number of states reporting utilization; suppressed records were not imputed. Prescriptions rose from 20,449 in 2021 to 3,745,987 in 2025, and gross reimbursement from $24.7 million to $4.44 billion. Although 12 to 13 states formally covered these drugs for obesity in 2024, 41 states reported Wegovy utilization in the fourth quarter of 2024 and 44 reported Zepbound utilization in the fourth quarter of 2025, most of the increase following the cardiovascular and sleep apnea approvals. California accounted for 47% of 2025 gross reimbursement and the five highest-spending states for 81%. Where states added, suspended, restored, or ended obesity coverage, utilization moved in the same direction within one or two quarters; in the first quarter of 2026, prescriptions fell 80% in the four states that ended coverage. Gross reimbursement overstates net state cost, which depends on confidential rebates and federal matching. Medicaid use of these brands extends well beyond states with formal obesity coverage; the public panel provides a baseline for monitoring future changes.

Introduction

Glucagon-like peptide-1 (GLP-1) receptor agonists approved for chronic weight management have become a fast-growing component of Medicaid prescription drug spending [1], and Medicaid treats them differently from most other drugs. Under section 1927(d)(2)(A) of the Social Security Act, state Medicaid programs may exclude from coverage or otherwise restrict "agents when used for anorexia, weight loss, or weight gain" [2]. Coverage of these drugs for obesity is therefore optional, and most states have not provided it: in a 2024 survey, 12 state Medicaid programs reported covering GLP-1 receptor agonists for obesity under fee-for-service as of July 2024, and 13 after North Carolina added coverage in August 2024 [3].

Several developments between 2021 and early 2026 changed which Medicaid enrollees could receive these drugs and how many did. First, the U.S. Food and Drug Administration (FDA) approved indications other than weight management: cardiovascular risk reduction for semaglutide 2.4 mg (Wegovy) in adults with established cardiovascular disease and obesity or overweight on March 8, 2024 [4, 5]; treatment of moderate to severe obstructive sleep apnea in adults with obesity for tirzepatide (Zepbound) on December 20, 2024 [6, 7]; and accelerated approval of semaglutide 2.4 mg for noncirrhotic metabolic

dysfunction-associated steatohepatitis (MASH) with moderate to advanced fibrosis on August 15, 2025 [8, 9]. When prescribed for these indications, the drugs fall outside the weight-loss exclusion, and states must cover covered outpatient drugs for medically accepted indications that are not excluded [2]. Second, the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit requires Medicaid to cover necessary treatment, including prescription drugs, for enrollees under 21 years of age whether or not the state covers that treatment for adults [10]. Third, the Centers for Medicare & Medicaid Services (CMS) proposed in November 2024 to reinterpret the exclusion so that anti-obesity medications would be covered [11], but the April 2025 final rule did not adopt that provision [12]. Fourth, states changed their own policies in both directions. North Carolina (August 2024), South Carolina (November 2024), Missouri (early 2025), and Tennessee (August 2025) added coverage [3, 13, 14, 15]; North Carolina suspended its coverage from October 1 to December 12, 2025, during a state budget stalemate [1, 16]; and California, New Hampshire, Pennsylvania, and South Carolina ended coverage for obesity around January 2026, a change KFF attributed to state budget challenges and the cost of coverage [1, 13]. Fifth, supply was constrained for much of the period: semaglutide injection products were on the FDA drug shortage list from March 2022 (Wegovy) until February 21, 2025 [17], and tirzepatide injection products from December 15, 2022, until FDA determined the shortage resolved on October 2, 2024, a determination it reaffirmed on December 19, 2024 [18].

Measuring Medicaid use of the obesity-indicated products requires separating them from diabetes-indicated products that contain the same molecule but carry different brand names and different National Drug Codes (NDCs). Semaglutide is sold as Wegovy for obesity and as Ozempic and Rybelsus for diabetes, tirzepatide as Zepbound and Mounjaro, and liraglutide as Saxenda and Victoza. The CMS State Drug Utilization Data (SDUD), which report utilization and reimbursement by NDC, state, and quarter, make this separation possible [19]. Previous SDUD analyses described anti-obesity medication use nationally [20], by state and year through 2022 [21], and by state and quarter for obesity-labeled GLP-1 receptor agonists through 2024, either pooled across products [22] or in relation to state coverage decisions [23]. None extends through the coverage eliminations of January 2026 or reports utilization and spending separately for each brand.

We therefore described Medicaid utilization of and gross spending on anti-obesity GLP-1 receptor agonist brands by state, quarter, and brand from 2021 through the first quarter of 2026, using the full-year 2025 SDUD released in July 2026. We addressed four questions: (1) how large and how geographically concentrated utilization and gross spending were; (2) how many states reported utilization of each brand over time; (3) whether states without previously reported utilization began reporting it after the cardiovascular and sleep apnea approvals; and (4) how utilization changed in states that added, suspended, restored, or ended obesity coverage, including in the first quarter of 2026.

Materials and methods

Study design and data source

This was a descriptive, repeated cross-sectional study of the CMS State Drug Utilization Data annual files for 2021 through 2026, accessed through the data.medicaid.gov datastore on July 22, 2026 [19]. The 2026 file contained first-quarter data only. For each 11-digit NDC, state, year, quarter, and utilization type, SDUD report the number of prescriptions, the number of units, and the amount reimbursed. Utilization type distinguishes fee-for-service claims from managed care claims. Under the CMS cell suppression policy, the counts and amounts of any record representing fewer than 11 prescriptions are withheld and the record is flagged as suppressed. States may revise earlier quarters in later releases, so the data are a snapshot as of the access date; the dataset identifiers for each annual file are recorded in S1 Dataset.

SDUD contain records for the 50 states, the District of Columbia, and Puerto Rico. Throughout this article, "states" refers to these 52 reporting entities. SDUD also contain national summary records (state code XX). These were excluded from all state-level and national totals and used only for the validation described below.

Study drugs and NDC crosswalk

We use "anti-obesity GLP-1 brands" for the GLP-1 receptor agonist brands first approved for chronic weight management, which are marketed under NDCs distinct from those of their diabetes-indicated counterparts. The term describes the products, not the reason for any prescription: by the end of the study period Wegovy also carried cardiovascular and MASH indications and Zepbound a sleep apnea indication, and SDUD contain no diagnosis information.

The study drugs were every GLP-1 receptor agonist product marketed in the United States with an indication for chronic weight management, cardiovascular risk reduction, obstructive sleep apnea, or MASH:

- **Wegovy** (semaglutide 2.4 mg injection; oral semaglutide tablets, 1.5 to 25 mg, from 2026); Novo Nordisk. Obesity approval June 4, 2021, new drug application (NDA) 215256 [24]; cardiovascular indication March 8, 2024 [4]; MASH indication August 15, 2025 (accelerated approval) [8].
- **Zepbound** (tirzepatide injection); Eli Lilly. Obesity approval November 8, 2023 (NDA 217806) [25]; sleep apnea indication December 20, 2024 [6].
- **Saxenda** (liraglutide 3 mg injection); Novo Nordisk. Obesity approval December 23, 2014 (NDA 206321) [26].
- **Liraglutide 3 mg (generic)**: abbreviated new drug application (ANDA) generics referencing Saxenda and indicated for weight management: Teva (ANDA 214568, marketed August 2025) and Cipla (ANDA 217234, marketed February 2026). These were identified by checking the labeled indication of every generic liraglutide product; the five generics referencing Victoza, which are indicated for diabetes, were excluded.

- **Foundayo** (orforglipron tablets); Eli Lilly. Approved April 1, 2026 (NDA 220934) for chronic weight management [27]. Because it was approved after the last quarter of available data, no utilization was expected, and none appeared.

Diabetes-indicated GLP-1 brands (Ozempic, Rybelsus, Mounjaro, Victoza, Trulicity, Byetta, Bydureon, Adlyxin, Soliqua, Xultophy, and all diabetes-indicated liraglutide generics) were excluded. Because the study drugs were defined by NDC, no utilization of a diabetes-indicated brand could enter the data.

We built a crosswalk linking each brand to its package NDCs from the openFDA NDC Directory, accessed the same day [28]. Indications were confirmed against FDA labeling and approval dates against Drugs@FDA approval letters. The directory listed 60 package NDCs. Because it omits packages that are no longer listed, we also searched every SDUD annual file by product name for each brand and molecule and reviewed every NDC that appeared under a study brand name but was absent from the crosswalk. This supplementary search added 12 delisted package NDCs (5 Wegovy, 7 Zepbound) that accounted for 232 state records. The final crosswalk comprised 72 package NDCs (Wegovy 18, Zepbound 40, Saxenda 4, generic liraglutide 3 mg 3, Foundayo 7); it is provided, with the source of each NDC, in S1 Dataset.

Outcome measures

Outcome measures
The primary outcomes were the number of prescriptions and gross reimbursement. Gross reimbursement was the SDUD total amount reimbursed, which is the sum of the amount reimbursed by Medicaid and the amount reimbursed by non-Medicaid sources, before manufacturer rebates. The Medicaid amount accounted for 98.8% of gross reimbursement in 2025. Both outcomes were summed by state, quarter, brand, and utilization type, and national totals were obtained by summing the state records.

The secondary outcome was the number of states reporting utilization of each brand in each quarter. A state was counted as reporting utilization of a brand in a quarter if it had at least one non-suppressed record (11 or more prescriptions) for that brand in that quarter. We also calculated gross reimbursement per prescription by brand and year, and each state's share of national gross reimbursement in 2025.

Handling of suppressed records

Suppressed records were retained as evidence that some utilization occurred, but their prescriptions and reimbursement were not imputed and contributed nothing to totals. A state with only suppressed records for a brand in a quarter was therefore not counted as reporting utilization of that brand in that quarter. To estimate how much utilization suppression removed from national totals, we compared the state-summed totals with the national summary records, which include values suppressed in the state records; because a national record can itself be suppressed in a low-volume quarter, this comparison is approximate.

Statistical analysis

All analyses were descriptive, and no hypothesis tests were performed. We tabulated national prescriptions and gross reimbursement by brand and year, and the number of states reporting each brand by quarter.

To describe utilization around the cardiovascular approval (March 8, 2024; event quarter, first quarter of 2024) and the sleep apnea approval (December 20, 2024; event quarter, fourth quarter of 2024), we compared the number of states reporting the relevant brand in the four quarters before the event quarter (pre-event period) with the number reporting it in the event quarter or the three following quarters (post-event period). A newly reporting state was one that did not report utilization of the brand in the pre-event period but did in the post-event period. Because a state with only suppressed pre-event records had some prior utilization, newly reporting states are shown separately according to whether they had any pre-event SDUD records. The MASH approval (event quarter, third quarter of 2025) was followed by only two quarters of data and was not analyzed in this way. These comparisons describe timing; they do not estimate causal effects.

To describe concentration, we ranked states by 2025 gross reimbursement. To describe state coverage changes, we identified additions, suspensions, restorations, and eliminations of obesity coverage documented in the sources cited in the Introduction. For each change, we compared utilization in the last full quarter before it took effect (for North Carolina's restoration, the fourth quarter of 2025, during most of which coverage was suspended) with utilization in the highest quarter after it and before any subsequent change; for North Carolina's suspension this was the fourth quarter of 2025, and for changes effective in late 2025 or January 2026 it was the first quarter of 2026, the latest available. For the eliminations effective around January 2026, we also compared the first quarter of 2026 with the fourth quarter of 2025 in the four eliminating states combined and in the other 48 states combined. We did not review the coverage policies of all 52 states. To describe growth outside documented coverage, we counted states other than the nine with a documented coverage policy in our sources (California, Massachusetts, Michigan, Missouri, New Hampshire, North Carolina, Pennsylvania, South Carolina, and Tennessee) whose prescriptions in the second half of 2025 exceeded 1,000 and were at least five times their prescriptions in the second half of 2024.

Analyses used Python 3 with the standard library only. The extraction and analysis code, the panel, and all computed tables are provided in S1 Dataset and deposited at Zenodo [29]. Reporting follows the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement [30] (S1 Checklist).

Ethics statement

This study used aggregate, publicly available administrative data containing no individual-level information; institutional review board review was not required.

Results

Study sample

The panel comprised 7,583 SDUD records from the 52 states for 2021 through the first quarter of 2026 (excluding 468 national summary records), aggregated into 2,275 state, quarter, brand, and utilization type observations. Of the records, 3,128 (41.3%) were suppressed; 920 observations consisted only of suppressed records. Suppressed records were concentrated in early launch quarters, Saxenda, and small states. State-summed totals captured 99.9% of the 2025 national prescriptions recorded in the national summary records for both Wegovy and Zepbound, and suppression removed less than 0.4% of national prescriptions and gross reimbursement for both brands in 2024 and 2025. In 2025, fee-for-service claims accounted for 58% of prescriptions and managed care claims for 42%.

National utilization and gross spending

Prescriptions rose from 20,449 in 2021 to 514,773 in 2023, 1,414,744 in 2024, and 3,745,987 in 2025, and gross reimbursement rose from $24.7 million to $0.67 billion, $1.75 billion, and $4.44 billion (Table 1). From 2024 to 2025, prescriptions increased 165% and gross reimbursement 153%. Gross reimbursement for 2021 through 2025 totaled $7.01 billion for 5.79 million prescriptions. National quarterly prescriptions were 1,132,934 in the third quarter of 2025 and 1,101,636 in the fourth; the decline is accounted for by North Carolina, and prescriptions in the other 51 states rose 4.7%.

Table 1
Medicaid prescriptions and gross reimbursement for anti-obesity GLP-1 brands, by brand and year.

Year	Wegovy	Zepbound	Saxenda	Liraglutide 3 mg (generic)	Total
2021	2,310 / $2.7M	NA	18,139 / $22.0M	NA	20,449 / $24.7M
2022	30,176 / $40.4M	NA	67,837 / $83.0M	NA	98,013 / $123.4M
2023	407,549 / $536.9M	429 / $0.4M	106,795 / $128.8M	NA	514,773 / $666.1M
2024	1,102,817 / $1,429.2M	278,155 / $284.2M	33,772 / $40.2M	NA	1,414,744 / $1,753.6M
2025	1,993,883 / $2,598.4M	1,721,606 / $1,805.6M	28,807 / $34.2M	1,691 / $1.6M	3,745,987 / $4,439.8M
2026 (Q1 only)	236,826 / $306.3M	365,721 / $384.0M	2,808 / $3.3M	1,139 / $1.0M	606,494 / $694.6M

Each cell shows prescriptions / gross reimbursement in millions of US dollars, summed over the 52 states; national summary (XX) records are excluded. Gross reimbursement is the SDUD total amount

reimbursed before manufacturer rebates. NA, not applicable (brand not yet marketed). Foundayo (orforglipron, approved April 1, 2026) had no utilization records through the first quarter of 2026. Q1, first quarter.

In 2025, Wegovy accounted for 59% of gross reimbursement ($2.60 billion; 1,993,883 prescriptions) and Zepbound for 41% ($1.81 billion; 1,721,606 prescriptions). Zepbound prescriptions rose from 241,065 in the first quarter of 2025 to 608,430 in the fourth quarter, when Zepbound exceeded Wegovy (487,096) in both prescriptions and gross reimbursement for the first time; it remained ahead in the first quarter of 2026 (365,721 versus 236,826 prescriptions). Saxenda prescriptions peaked in 2023 (106,795) and fell to 28,807 in 2025. Generic liraglutide 3 mg first appeared in the third quarter of 2025 and accounted for 1,691 prescriptions that year. Gross reimbursement per prescription changed little within each brand: from 2022 to 2025 it ranged from $1,296 to $1,339 for Wegovy and from $1,188 to $1,223 for Saxenda, and it was $1,022 in 2024 and $1,049 in 2025 for Zepbound. In 2025 it was $953 for generic liraglutide 3 mg.

Number of states reporting utilization

The number of states reporting Wegovy utilization rose from 7 in the fourth quarter of 2021 to 17 in the fourth quarter of 2023, 41 in the fourth quarter of 2024, and 47 in the fourth quarter of 2025; three states (Alaska, North Dakota, and South Dakota) did not report it through 2025 (Table 2). Zepbound was reported by 8 states in its launch quarter (fourth quarter of 2023), 20 in the fourth quarter of 2024, and 44 in the fourth quarter of 2025; four states (Arkansas, North Dakota, Oklahoma, and South Dakota) did not report it through 2025. Saxenda was reported by no more than 17 states in any quarter and by 9 in the fourth quarter of 2025.

Table 2
Number of states reporting utilization, by brand.

Brand	First quarter reported	Q4 2023	Q4 2024	Q4 2025	Peak, any quarter through Q1 2026	Never reported through 2025
Wegovy	Q3 2021	17	41	47	49	3 (Alaska, North Dakota, South Dakota)
Zepbound	Q4 2023	8	20	44	45	4 (Arkansas, North Dakota, Oklahoma, South Dakota)
Saxenda	Q1 2021	14	16	9	17	28
Liraglutide 3 mg (generic)	Q3 2025	0	0	12	14	40

States are the 50 states, the District of Columbia, and Puerto Rico (n = 52). A state was counted as reporting a brand in a quarter if it had at least one non-suppressed record (11 or more prescriptions).

The peaks for Wegovy (49) and Zepbound (45) occurred in the first quarter of 2026 (Q1 2026). Q4, fourth quarter.

Utilization around the 2024 indication approvals

Wegovy was reported by 19 states in the four quarters before the cardiovascular approval and by 41 in the event quarter and the following three quarters (Table 3). Of the 22 newly reporting states, 8 had no SDUD records for Wegovy in the pre-event period and 14 had only suppressed records, indicating low-level rather than absent prior use. Quarterly Wegovy prescriptions rose from 121,248 in the event quarter to 397,258 in the fourth quarter of 2024. Zepbound was reported by 19 states in the four quarters before the sleep apnea approval and by 45 afterward; of the 27 newly reporting states, 14 had no pre-event records and 13 had only suppressed records. Quarterly Zepbound prescriptions rose from 134,592 in the event quarter to 608,430 in the fourth quarter of 2025.

Table 3
States reporting utilization before and after the 2024 indication approvals.

Indication approval	States, pre-event	States, post-event	Newly reporting	No pre-event records	Only suppressed pre-event records	Newly reporting states with no pre-event records
Wegovy: cardiovascular risk reduction (March 8, 2024; event quarter Q1 2024)	19	41	22	8	14	Alabama, Connecticut, Idaho, Kentucky, Maine, Montana, Oklahoma, Puerto Rico
Zepbound: obstructive sleep apnea (December 20, 2024; event quarter Q4 2024)	19	45	27	14	13	Alaska, Alabama, Georgia, Iowa, Idaho, Kentucky, Maine, Missouri, Mississippi, Montana, Nevada, New York, West Virginia, Wyoming

Values are numbers of states. Pre-event: the four quarters before the event quarter. Post-event: the event quarter and the three following quarters. A newly reporting state did not report the brand in the pre-event period but did in the post-event period; newly reporting states are divided into those with no pre-event SDUD records and those with only suppressed pre-event records. A state that reported in the pre-event period need not report in the post-event period (Louisiana reported Zepbound only before the sleep apnea approval), so pre-event plus newly reporting states can exceed the post-event count. States with only suppressed pre-event records had low-level (fewer than 11 prescriptions per record) rather than absent prior use.

Distribution of 2025 spending across states

All 52 states had utilization records in 2025, and 50 had non-suppressed utilization (North Dakota and South Dakota had only suppressed records). California accounted for $2.07 billion (47%) of national gross reimbursement, followed by Pennsylvania ($553.5 million), Michigan ($422.9 million), North Carolina ($302.0 million), and Massachusetts ($227.5 million); together, these five states accounted for 81% (Table 4).

Table 4
States with the highest gross reimbursement for anti-obesity GLP-1 brands, 2025.

Rank	State	Prescriptions, 2025	Gross reimbursement, 2025	Share of national gross reimbursement
1	California	1,712,999	$2,070,189,884	46.6%
2	Pennsylvania	456,306	$553,540,977	12.5%
3	Michigan	359,264	$422,922,580	9.5%
4	North Carolina	228,314	$301,977,547	6.8%
5	Massachusetts	217,409	$227,531,574	5.1%
6	Wisconsin	177,292	$206,338,858	4.6%
7	Minnesota	124,839	$154,245,440	3.5%
8	Missouri	125,872	$133,072,985	3.0%
9	Virginia	45,599	$54,288,305	1.2%
10	Tennessee	40,762	$49,908,200	1.1%

All study brands combined. Share is of national gross reimbursement summed over the 52 states. The full ranking of all states by brand is in S1 Dataset.

State coverage changes, including the first quarter of 2026

In each state with a documented coverage change, utilization moved in the direction of the change within one or two quarters (Table 5). In North Carolina, which added coverage in August 2024, prescriptions rose from 341 in the second quarter of 2024 to 90,809 in the third quarter of 2025; they fell to 10,370 in the fourth quarter of 2025, when coverage was suspended from October 1 to December 12, and rose to 50,521 in the first quarter of 2026 after coverage was restored. South Carolina's prescriptions rose from 42 before coverage began in November 2024 to 3,645 in the third quarter of 2025. In Missouri, prescriptions rose from none reported in 2024 to 75,418 in the first quarter of 2026, 99.7% of them for Zepbound. In Tennessee, which added coverage in August 2025, prescriptions rose from 3,712 in the second quarter of 2025 to 38,636 in the first quarter of 2026.

Table 5
Utilization before and after documented changes in state obesity coverage.

State	Documented coverage change	Before: prescriptions (gross)	After: prescriptions (gross)
North Carolina	Added obesity coverage, August 1, 2024	Q2 2024: 341 ($0.4M)	Q3 2025: 90,809 ($121.3M)
North Carolina	Suspended obesity coverage, October 1, 2025	Q3 2025: 90,809 ($121.3M)	Q4 2025: 10,370 ($12.9M)
North Carolina	Restored obesity coverage, December 12, 2025	Q4 2025: 10,370 ($12.9M)	Q1 2026: 50,521 ($64.5M)
South Carolina	Added obesity coverage, November 1, 2024	Q3 2024: 42 ($0.0M)	Q3 2025: 3,645 ($4.5M)
Missouri	Added obesity-indicated GLP-1s to the preferred drug list, effective early 2025	Q4 2024: 0 ($0.0M)	Q1 2026: 75,418 ($80.2M)
Tennessee	Added obesity coverage, August 1, 2025	Q2 2025: 3,712 ($4.8M)	Q1 2026: 38,636 ($46.1M)
California	Ended obesity coverage, January 1, 2026	Q4 2025: 523,015 ($623.2M)	Q1 2026: 126,928 ($150.7M)
Pennsylvania	Ended obesity coverage, January 2026	Q4 2025: 129,659 ($156.1M)	Q1 2026: 5,825 ($6.8M)
New Hampshire	Ended obesity coverage, January 2026	Q4 2025: 5,363 ($6.2M)	Q1 2026: 625 ($0.6M)
South Carolina	Ended obesity coverage, January 2026	Q4 2025: 3,316 ($4.1M)	Q1 2026: 1,269 ($1.3M)

All study brands combined. Before: last full quarter before the effective date; for North Carolina's restoration, the fourth quarter of 2025, during most of which coverage was suspended. After: highest quarter after the effective date and before any subsequent change; for North Carolina's suspension, the fourth quarter of 2025 (Q4 2025), and for changes effective in late 2025 or January 2026, the first quarter of 2026 (Q1 2026), the latest available. Changes are those documented in the cited sources; the coverage policies of all 52 states were not reviewed. South Carolina appears twice, once per change. Q1 2026 values are from a first-quarter file subject to revision. M, million US dollars.

All 52 states filed at least one study-drug record for the first quarter of 2026. In the four states that ended obesity coverage around January 2026, prescriptions fell 80% from the fourth quarter of 2025, from 661,353 to 134,647, and gross reimbursement fell from $789.6 million to $159.5 million. Prescriptions fell 76% in California, 96% in Pennsylvania, 88% in New Hampshire, and 62% in South Carolina. In the other 48 states combined, prescriptions rose 7%, and fell 2% when North Carolina, whose

coverage was restored during the period, was excluded. The numbers of states reporting Wegovy (49) and Zepbound (45) in the first quarter of 2026 were the highest of any quarter.

Outside the documented changes, 20 states with no obesity coverage policy documented in our sources had at least five times as many prescriptions in the second half of 2025 as in the second half of 2024, with more than 1,000 prescriptions in the second half of 2025.

Discussion

Principal findings

Between 2021 and 2025, Medicaid utilization of anti-obesity GLP-1 brands grew from about 20,000 to 3.7 million prescriptions a year and gross reimbursement to $4.44 billion, and growth was continuing at the end of 2025 outside North Carolina. Growth in spending reflected growth in prescriptions rather than higher reimbursement per prescription. Three further findings stand out. First, utilization was reported in far more states than formally covered these drugs for obesity, and the increase was concentrated in the quarters after the cardiovascular and sleep apnea approvals. Second, spending was concentrated in a few states with broad coverage, led by California. Third, where states added, suspended, restored, or ended obesity coverage, utilization changed in the same direction within one or two quarters.

Utilization in states without formal obesity coverage

KFF counted 12 to 13 states covering GLP-1 receptor agonists for obesity in 2024 [3] and 16 as of October 2025 [1], yet 41 states reported Wegovy utilization in the fourth quarter of 2024 and 44 reported Zepbound utilization in the fourth quarter of 2025. Three coverage pathways can produce claims in states without an obesity benefit. Prescriptions for the cardiovascular, sleep apnea, and MASH indications fall outside the statutory exclusion [2]; EPSDT requires coverage of medically necessary drugs for enrollees under 21 [10]; and prior authorization on a case-by-case basis or through managed care plans can produce claims without a general benefit. California's policy after January 2026 illustrates the first two: the state ended coverage for weight loss alone but continues to cover Wegovy for cardiovascular disease and MASH and Zepbound for sleep apnea, subject to prior authorization or a diagnosis code, and continues to cover enrollees under 21 under EPSDT requirements [31]. These pathways are consistent with the utilization California still reported in the first quarter of 2026, although SDUD cannot attribute it to an age group or indication. Studies using data through 2023 or 2024 found use of these products concentrated in states with obesity coverage [22, 23, 32, 33]; the longer series reported here shows use spreading to states without such coverage after the 2024 approvals.

National shortages of semaglutide and tirzepatide during 2022 to 2025 [17, 18] are unlikely to explain this pattern, but they affect how it should be read. When the obesity-indicated products were scarce, some prescribers may have substituted diabetes-indicated products of the same molecule, such as Ozempic or Mounjaro, or compounded versions, and possible substitution between obesity-labeled and diabetes-labeled products has been reported in Medicaid [23]. Such use falls outside our NDC-defined

cohort. It therefore cannot account for anti-obesity brand utilization in states without an obesity benefit, but it means our figures understate total Medicaid use of these molecules for weight management, and shortages may have held down utilization of the study brands before 2025.

Interpreting the indication-approval comparisons

The comparisons around the 2024 approvals are descriptive. Many newly reporting states (14 of 22 for Wegovy and 13 of 27 for Zepbound) had suppressed utilization before the event, so the first reported utilization overstates the first utilization in those states; states with no pre-event records give the clearer signal. Even for those states, the timing cannot separate claims for the new indications from coverage changes made at the same time (North Carolina's August 2024 addition is the clearest example), changes in utilization management, or general growth in demand. Supply is a further explanation. Wegovy was in shortage throughout the cardiovascular window, and the tirzepatide shortage was declared resolved in October 2024, with the determination reaffirmed on December 19, 2024, one day before the sleep apnea approval [18]; the growth in Zepbound utilization after the approval therefore coincides with improved supply. What the data show is that the geographic reach of these brands widened in the quarters when indications outside the statutory exclusion became available, alongside other changes. The August 2025 MASH approval came too late in the period for a comparable analysis.

Gross versus net spending, cost-effectiveness, and affordability

All dollar figures in this study are gross reimbursement before rebates. Manufacturers pay Medicaid a statutory rebate of at least 23.1% of the average manufacturer price for brand-name drugs plus an inflation component [2], and many states negotiate supplemental rebates. Novo Nordisk has reported that rebates and other fees across all payers accounted for about 40% of the cost of Ozempic and Wegovy [1]. The federal government also pays a share of each state's Medicaid costs, set by statute at 50% to 83% for most services and at 90% for adults covered through the Affordable Care Act expansion [34]. The cost to a state's budget is therefore a fraction of the gross amounts reported here. Manufacturer pricing data reported under the rebate program are confidential [35], so net spending on individual drugs cannot be calculated from public data. States do publish aggregate estimates in budget documents, but these are not comparable with SDUD gross reimbursement. California, for example, projected that its cost of covering these drugs for weight loss would reach nearly $800 million a year within four years had coverage continued [36], whereas California's gross reimbursement for the study brands was $2.07 billion in 2025. The two figures differ in period and scope, and the published projection does not state how it treats rebates or federal matching; the gap illustrates why gross SDUD amounts should be read as upper bounds on, not estimates of, state cost.

Value per unit of health and affordability are distinct questions. In its December 2025 assessment, the Institute for Clinical and Economic Review (ICER) found semaglutide and tirzepatide cost-effective at estimated annual net prices of $6,830 and $7,973, but issued an access and affordability alert because fewer than 1% of the 92 million eligible people in the United States could be treated within five years

without exceeding its annual budget impact threshold of $880 million, even at the $245 monthly price announced for Medicare in November 2025 [37]. The Congressional Budget Office estimated that authorizing Medicare to cover anti-obesity medications would increase federal spending by about $35 billion from 2026 to 2034, with savings from improved health offsetting only a small share of drug costs [38]. Together, these assessments indicate that broad coverage at current prices is unlikely to pay for itself within a budget period, which is consistent with the budget pressure states cited when ending coverage [1] and places price reductions by manufacturers at the center of any sustainable expansion. Under agreements announced in November 2025, Medicare and Medicaid programs would pay $245 per month for these drugs [36]; future SDUD releases will show how such prices affect state coverage decisions.

Policy implications

During the study period the federal proposal to require coverage of anti-obesity medications was not adopted [11, 12], and state coverage moved in both directions. The first quarter of 2026 offers an early indication of the effect of the eliminations: prescriptions fell sharply in the eliminating states while changing little elsewhere. North Carolina's suspension and restoration showed the same responsiveness within a single state, and South Carolina's addition and later elimination of coverage, fourteen months apart, did the same within the period. Future SDUD releases will show whether these changes persist as filings are completed, whether indication-based and EPSDT utilization continues without an obesity benefit, and how generic liraglutide and orforglipron affect prices.

The findings also raise questions that a utilization analysis cannot settle. Because coverage is optional [2], enrollees with the same condition receive different answers depending on their state of residence. When access depends on an approved non-obesity indication, an enrollee with obesity alone may become eligible only after cardiovascular disease, sleep apnea, or MASH has developed. The January 2026 eliminations ended treatment for enrollees who had been taking these drugs, with clinical consequences that claims data cannot show. Finally, the statute lists weight-loss agents among the classes a state may exclude alongside agents used for cosmetic purposes or hair growth [2], whereas these drugs now carry trial evidence for cardiovascular, sleep apnea, and liver outcomes [5, 7, 9]. How coverage is framed, around weight or around the conditions these drugs treat, may influence both public support for coverage and its durability. The panel quantifies these trade-offs; it does not resolve them.

Comparison with prior work

Earlier SDUD analyses documented rapid national growth in anti-obesity medication use [20] and state variation in coverage and reimbursement through 2022 [21]. More recent studies reported state and quarterly utilization of obesity-labeled GLP-1 receptor agonists through 2024 and found it concentrated in states with coverage [22], estimated that adding coverage increased obesity-labeled prescribing with possible substitution from diabetes-labeled products [23], and found similar patterns in person-level claims [32, 33]. KFF has reported molecule- and class-level Medicaid spending and tracked state coverage policies [1, 3]. This study adds utilization and gross spending reported separately for each

brand, including generic liraglutide 3 mg; extends the series through the coverage eliminations of the first quarter of 2026; recovers delisted NDCs that a directory-only crosswalk would miss; and makes the state by quarter by brand panel publicly available for reuse [29].

Strengths and limitations

The main strengths are the NDC-level separation of obesity-indicated from diabetes-indicated products, complete coverage of all 52 reporting states, explicit accounting for suppressed records, and a public, reproducible dataset.

The study has several limitations in addition to the gross-versus-net distinction discussed above. First, SDUD count prescriptions, not people, and the days' supply per prescription varies; utilization type reflects the payment pathway, not the clinical setting. Second, suppression of records with fewer than 11 prescriptions makes counts of reporting states conservative and the newly-reporting-state comparisons sensitive to suppression, although its effect on national totals was less than 0.4% for Wegovy and Zepbound in 2024 and 2025. Third, states revise recent quarters as filings are completed; the panel is a July 22, 2026 snapshot, and the first quarter of 2026 is the most exposed to revision, although a filing lag would not be expected to affect only the states that changed coverage. Fourth, the crosswalk relies on the current NDC directory plus delisted NDCs found by product name, so an NDC recorded under an unrecognizable name could have been missed. Fifth, SDUD contain no diagnosis, indication, age, or prior authorization information, so obesity-directed use cannot be distinguished from use for other indications or attributed to EPSDT, and the indication analyses are ecological. Sixth, SDUD exclude prescriptions not billed to Medicaid, such as cash purchases and manufacturer direct-to-consumer sales, which grew during the period, and diabetes-indicated or compounded products used for weight management fall outside the cohort, so our figures understate total use of these molecules for weight management. Seventh, the drug shortages of 2022 to 2025 coincide with both indication windows and may have shaped the timing of reported utilization. Eighth, states are expected to exclude 340B Drug Pricing Program claims from rebate invoicing, but these claims are difficult to identify and SDUD carry no 340B indicator, so utilization through 340B covered entities may be inconsistently captured.

Conclusions

Medicaid utilization of anti-obesity GLP-1 brands grew from about 20,000 prescriptions in 2021 to 3.7 million in 2025, with $4.44 billion in gross reimbursement in 2025. Utilization extended to far more states than formally covered these drugs for obesity, with timing consistent with the 2024 cardiovascular and sleep apnea approvals and with the EPSDT obligation, and it changed promptly when states added, suspended, restored, or ended coverage. Spending was concentrated in a few states with broad coverage, and gross reimbursement substantially overstates the net cost to states. The public state by quarter by brand panel provides a baseline for monitoring further coverage changes, indication-based use without an obesity benefit, and the effects of new prices and generic entry.

Declarations

Competing interests

The author owns and operates HelloPharmacist, a consumer medication-information website that carries advertising and whose drug pages display Medicaid utilization information derived from the same public data source used in this study. No other competing interests exist.

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Data availability

The minimal data set and accompanying code are openly available at Zenodo (doi:10.5281/zenodo.21494203; concept DOI 10.5281/zenodo.21494202 resolves to the latest version) under a CC BY 4.0 license. The files contain the complete state by quarter by brand panel, the brand-to-NDC crosswalk with the source of each NDC, the suppression and completeness audits, all computed tables, and the full extraction and analysis code. The source State Drug Utilization Data (annual datasets 2021 to 2026) from the Centers for Medicare & Medicaid Services are public domain at https://data.medicaid.gov, and the National Drug Code Directory from the U.S. Food and Drug Administration is public domain at https://open.fda.gov/apis/drug/ndc/.

Author contributions

Brian Staiger: conceptualization, data curation, formal analysis, investigation, methodology, software, validation, writing (original draft), and writing (review and editing).

References

1. Williams E (2026) Medicaid coverage of and spending on GLP-1s. KFF; January 16, 2026. Accessed November 4. https://www.kff.org/medicaid/medicaid-coverage-of-and-spending-on-glp-1s/
2. Social Security Act § (1927) 42 U.S.C. § 1396r-8 (Medicaid Drug Rebate Program; § 1927(d)(2)(A) permits states to exclude from coverage or otherwise restrict agents when used for anorexia, weight loss, or weight gain)
3. Hinton E, Williams E, Raphael J, Mudumala A, Rudowitz R, Gifford K et al (2024) As pandemic-era policies end, Medicaid programs focus on enrollee access and reducing health disparities amid future uncertainties: results from an annual Medicaid budget survey for state fiscal years 2024 and

2025. KFF and Health Management Associates; October 23, https://www.kff.org/medicaid/50-state-medicaid-budget-survey-fy-2024-2025/

4. Food US, Administration D (2024) NDA 215256/S-011 supplement approval letter (Wegovy, cardiovascular risk reduction), March 8, https://www.accessdata.fda.gov/drugsatfda_docs/appletter/2024/215256Orig1s011ltr.pdf
5. Lincoff AM, Brown-Frandsen K, Colhoun HM, Deanfield J, Emerson SS, Esbjerg S et al (2023) SELECT Trial Investigators. Semaglutide and cardiovascular outcomes in obesity without diabetes. N Engl J Med 389(24):2221–2232. 10.1056/NEJMoa2307563
6. Food US, Administration D (2024) NDA 217806/S-013 supplement approval letter (Zepbound, obstructive sleep apnea), December 20, https://www.accessdata.fda.gov/drugsatfda_docs/appletter/2024/217806Orig1s013ltr.pdf
7. Malhotra A, Grunstein RR, Fietze I, Weaver TE, Redline S, Azarbarzin A et al (2024) SURMOUNT-OSA Investigators. Tirzepatide for the treatment of obstructive sleep apnea and obesity. N Engl J Med 391(13):1193–1205. 10.1056/NEJMoa2404881
8. Food US, and Drug Administration (2025). NDA 215256/S-024 supplement approval letter (Wegovy, noncirrhotic metabolic dysfunction-associated steatohepatitis; accelerated approval), August 15, https://www.accessdata.fda.gov/drugsatfda_docs/appletter/2025/215256Orig1s024ltr.pdf
9. Sanyal AJ, Newsome PN, Kliers I, Østergaard LH, Long MT, Kjær MS, ESSENCE Study Group et al (2025) Phase 3 trial of semaglutide in metabolic dysfunction-associated steatohepatitis. N Engl J Med 392(21):2089–2099. 10.1056/NEJMoa2413258
10. Social Security Act § 1905(r)(5), 42 U.S.C. § 1396d(r)(5) (Early and Periodic Screening, Diagnostic, and Treatment services for individuals under 21 years of age include necessary treatment to correct or ameliorate conditions, whether or not such services are covered under the state plan)
11. Centers for Medicare & Medicaid Services. Medicare and Medicaid Programs; Contract Year 2026 Policy and Technical Changes (proposed rule, CMS-4208-P). Fed Regist (2024) ;89:99340 (December 10, 2024)
12. Centers for Medicare & Medicaid Services. Medicare and Medicaid Programs; Contract Year 2026 Policy and Technical Changes (final rule, CMS-4208-F). Fed Regist (2025) ;90:15792 (April 15, 2025) (anti-obesity medication provision not finalized)
13. SC Daily Gazette (2025) SC Medicaid program to stop covering expensive weight loss drugs for obesity. November 17, https://scdailygazette.com/2025/11/17/sc-medicaid-program-to-stop-covering-expensive-weight-loss-drugs-for-obesity/
14. Missouri Department of Social Services, MO HealthNet Division (2024) GLP-1 receptor agonists indicated for obesity: preferred drug list edit, October 15, https://mydss.mo.gov/media/pdf/glp-1-receptor-agonists-indicated-obesity-pdl-edit-october-15-2024
15. American Diabetes Association The American Diabetes Association and partners celebrate TennCare's decision to cover FDA-approved weight-management medications [press release].

August 2025. https://diabetes.org/newsroom/press-releases/american-diabetes-association-and-partners-celebrate-tenncares-decision

16. North Carolina Department of Health and Human Services, Medicaid NC (2025) NC Medicaid to reinstitute coverage of GLP-1s for weight management. December 19. https://medicaid.ncdhhs.gov/blog/2025/12/19/nc-medicaid-reinstitute-coverage-glp-1s-weight-management
17. U.S. Food and Drug Administration. Declaratory order: resolution of shortages of semaglutide injection products (Ozempic and Wegovy). February 21, (2025) https://www.fda.gov/media/185526/download
18. U.S. Food and Drug Administration. Declaratory order: resolution of shortages of tirzepatide injection products (Mounjaro and Zepbound). December 19, (2024) https://www.fda.gov/media/184606/download
19. Centers for Medicare & Medicaid Services (2026) State Drug Utilization Data (annual datasets, 2021–2026). data.medicaid.gov. Accessed July 22. https://data.medicaid.gov/datasets?fulltext=State+Drug+Utilization
20. Alsuhibani AA, Alrasheed MA, Alhomoud IS, Alsahali S, Almalki ZS, Guo JJ (2025) Spending, utilization, and price trends for anti-obesity medications in U.S. Medicaid programs: an empirical analysis from 1999 to 2023. Front Med (Lausanne) 12:1537181. 10.3389/fmed.2025.1537181
21. Liu BY, Rome BN (2024) State coverage and reimbursement of antiobesity medications in Medicaid. JAMA 331(14):1230–1232. 10.1001/jama.2024.3073
22. Fung RYL, Tonti L, Pesko MF (2026) Glucagon-like peptide-1 receptor agonists and Medicaid: insights from policy and prescription data. Med Care Res Rev. 10.1177/10775587261494447
23. Khanna R, Wang MC, Venkataramani AS (2026) GLP-1 receptor agonist coverage for obesity in Medicaid and total GLP-1 receptor agonist utilization. JAMA Health Forum 7(9):e263353. 10.1001/jamahealthforum.2026.3353
24. Food US, Administration D (2021) NDA 215256 approval letter (Wegovy), June 4, https://www.accessdata.fda.gov/drugsatfda_docs/appletter/2021/215256Orig1s000ltr.pdf
25. Food US, Administration D (2023) NDA 217806 approval letter (Zepbound), November 8. https://www.accessdata.fda.gov/drugsatfda_docs/appletter/2023/217806Orig1s000ltr.pdf
26. Food US, Administration D (2014) NDA 206321 approval letter (Saxenda), December 23. https://www.accessdata.fda.gov/drugsatfda_docs/appletter/2014/206321Orig1s000ltr.pdf
27. Foundayo (2026) orforglipron), April 1. https://www.accessdata.fda.gov/drugsatfda_docs/appletter/2026/220934Orig1s000ltr.pdf
28. U.S. Food and Drug Administration. National Drug Code Directory (openFDA drug/ndc API). Accessed July 22, (2026) https://open.fda.gov/apis/drug/ndc/
29. Staiger B (2026) State Medicaid utilization and gross spending on anti-obesity GLP-1 receptor agonists, 2021–2025: state × quarter × brand panel (v1.0.0) [dataset]. 10.5281/zenodo.21494203. Zenodo

30. von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP, STROBE Initiative (2007) The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. Lancet 370:1453–1457. 10.1016/S0140-6736(07)61602-X
31. California Department of Health Care Services, Rx M-C (2026) GLP-1 drugs: Medi-Cal Rx members' frequently asked questions (FAQs), version 5.0. April 6, https://medi-calrx.dhcs.ca.gov/cms/medicalrx/static-assets/documents/faq/Members_State_Budget_Policy_Updates_FAQ.pdf
32. Dun C, Fang M, Wang D, Hettinger G, Grams ME, Hicks CW et al (2026) State-level variation in GLP-1 receptor agonist use among Medicaid beneficiaries without diabetes by state obesity coverage policy. Diabetes Care 49(11):e181–e183. 10.2337/dc26-1511
33. Do S, Christensen K, Inneh A, Peasah S, Good C (2026) State-level variation in the use of glucagon-like peptide-1 receptor agonists for weight loss and diabetes: a real-world analysis. J Manag Care Spec Pharm 32(5):625–630. 10.18553/jmcp.2026.32.5.625
34. Social Security Act § 1905(b) and § 1905(y), 42 U.S.C. § 1396d(b) and (y) (federal medical assistance percentage of not less than 50% and not more than 83%; 90% federal share for newly eligible adults)
35. Social Security Act § 1927(b)(3)(D), 42 U.S.C. § 1396r-8(b)(3)(D) (confidentiality of manufacturer pricing information reported under the Medicaid Drug Rebate Program)
36. Thompson D (2026) California ends Medicaid coverage of weight loss drugs despite TrumpRx plan. KFF Health News January 9, https://kffhealthnews.org/news/article/california-medicaid-medi-cal-glp1-weight-loss-drugs-ends-coverage-cost/
37. Lin GA, Lee W, Fahim SM, Richardson M, Phillips M, Raymond F et al Semaglutide and tirzepatide for obesity: effectiveness and value. Final report. Boston (MA): Institute for Clinical and Economic Review; December 16, 2025. https://icer.org/wp-content/uploads/2025/12/ICER_Obesity_Final-Report_For-Publication_121625-1.pdf
38. Congressional Budget Office (October 2024) How would authorizing Medicare to cover anti-obesity medications affect the federal budget? Congressional Budget Office, Washington (DC). https://www.cbo.gov/publication/60441

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