A REPORT TO THE 2025–2026 CALIFORNIA LEGISLATURE

Analysis of California Senate Bill 535: Obesity Treatment Parity Act

APRIL 22, 2025

CHBRP

California Health Benefits Review Program (CHBRP)
University of California, Berkeley

chbrp.org

KEY FINDINGS

Analysis of California Senate Bill 535:

Obesity Treatment Parity Act

Summary to the 2025–2026 California State Legislature April 22, 2025

CHBRP

Summary

The version of California Senate Bill 535 analyzed by California Health Benefits Review Program (CHBRP) would require coverage for intensive behavioral therapy (IBT), bariatric surgery, and at least one U.S. Food and Drug and Administration-(FDA)-approved anti-obesity medication (AOM) indicated for chronic weight management in patients with obesity.

In 2026, of the 22.2 million Californians enrolled in state-regulated health insurance, approximately 13.6 million of them would have insurance subject to SB 535.

Benefit Coverage

At baseline, nearly all the population with health insurance subject to SB 535 has coverage for IBT (99.8% enrollees), bariatric surgery (99.7% enrollees), and at least one FDA-approved AOM. Specifically, 93.2% of enrollees have existing coverage for a non-glucagon-like peptide-1 [non-GLP-1] receptor agonist AOM. Postmandate, 100% of these enrollees would have coverage for all three obesity treatments. At baseline, 17.4% of enrollees have coverage for at least one FDA-approved glucagon-like peptide-1 [GLP-1] receptor agonist AOM. However, it is likely that 100% of enrollees would obtain coverage for a non–GLP-1 medication and that GLP-1 medications would not be fully adopted by plans complying with SB 535. SB 535 would likely not exceed essential health benefits (EHB)s.

Medical Effectiveness

CHBRP found *very strong evidence* that IBT is effective in reducing weight and improving related health outcomes in adults, adolescents, and children. There is *very strong evidence* that bariatric surgery is effective in reducing weight in adults, and *some evidence* it is effective in adolescents and children. There is *very strong evidence* that FDA-approved AOMs are effective in reducing weight in adults, and *conflicting evidence* they are effective in reducing weight in children and adolescents.

Cost and Public Health Impacts

In 2026, CHBRP estimates SB 535 would result in an increase in utilization of obesity treatments, including an additional: 35 enrollees receiving IBT; 4 receiving bariatric surgery; and 4,047 utilizing AOMs (all non–GLP-1). As a result, these enrollees would experience a 3% to 14% reduction in body weight and related health improvements. CHBRP estimates SB 535 would increase total premiums by approximately $530,000 and increase cost sharing by $98,000 each year. Noncovered expenses for enrollees would be reduced by $219,000.

Context

Obesity is a chronic health condition characterized by an increase in the size and amount of fat cells in the body.[1] Health care providers screen for obesity by calculating patients' body mass index (BMI), which takes into account an individual's height and weight. Adults with a BMI of 25 to ≤30 are categorized as overweight and those with a BMI of 30 or higher are categorized as obese.

There are many health consequences of obesity, such as an increased risk of heart disease, diabetes, respiratory issues, musculoskeletal disorders, and certain cancers, as well as reduced life expectancy.

There are several methods used to treat obesity. SB 535 focuses on three treatment types: intensive behavioral therapy (IBT), bariatric surgery, and anti-obesity medications (AOMs).

- **IBT** is a particular form of behavioral intervention that is structured and has several components. Patients are provided with tools to

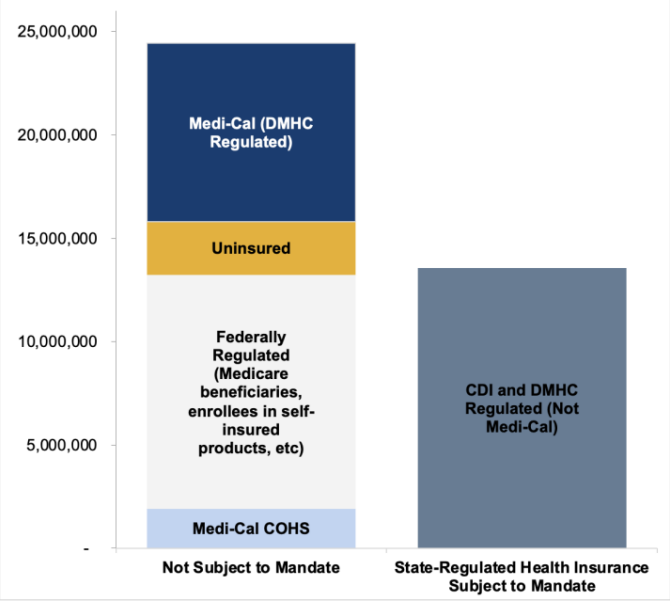
[1] Refer to CHBRP's full report for full citations and references.

support and maintain weight loss (e.g., food scales, pedometers).

- **Bariatric surgery** is a procedure conducted on the stomach or intestines to induce weight loss.

- **AOMs** are drugs used for chronic weight management. AOMs can be broken into two types of drugs: glucagon-like peptide-1 (GLP-1) receptor agonists, and non–GLP-1 medications. GLP-1 medications are a class of drugs that activate the body's GLP-1 receptors. This activation triggers several downstream effects, including lowering glucose (sugar) levels within the bloodstream, reducing digestion rate, and increasing the sensation of fullness for longer. GLP-1 medications are indicated for type 2 diabetes and obesity, among other conditions. Non–GLP-1 AOMs treat obesity through a variety of different mechanisms, including blocking fat absorption and deposition, suppressing appetite, and increasing metabolism.

Figure A. Health Insurance in CA and SB 535



Source: California Health Benefits Review Program, 2025.
Note: CHBRP generally assumes alignment of Medi-Cal managed care plan benefits, with limited exceptions.[2]
Key: CDI = California Department of Insurance; COHS = County Organized Health System; DHCS = Department of Health Care Services; DMHC = Department of Managed Health Care.

[2] Although COHS plans are not subject to the Knox-Keene Act, DHCS generally updates Medi-Cal Managed Care plan contracts, All Plan Letters, and other appropriate authorities for alignment of managed care plan benefits, except in cases when the benefit is carved out of the Medi-Cal Managed Care plan contract or the law exempts specified Medi-Cal contracted providers.

Bill Summary

SB 535 would require coverage for IBT, bariatric surgery, and at least one U.S. Food and Drug and Administration (FDA)-approved AOM indicated for chronic weight management in patients with obesity. In addition, the bill would prohibit coverage criteria from being more restrictive than the FDA-approved indications for those treatments.

If enacted, SB 535 would apply to the health insurance of approximately 13.6 million enrollees (35.8% of all Californians). Figure A notes how many Californians have health insurance that would be subject to SB 535.

Impacts

AOMs have several FDA-approved indications. Based on the language of the bill, CHBRP assumed that SB 535 would apply only to those indicated for chronic weight management, which would include both GLP-1 and non–GLP-1 medications. CHBRP assumed that due to the cost of GLP-1 medications, health plans and policies not yet in compliance with SB 535 at baseline would become compliant by offering a non–GLP-1 medication due to the lower cost.

In addition, within the population of enrollees with overweight or obesity, some enrollees are diagnosed with comorbidities, such as type 2 diabetes. CHBRP assumed that the enrollees diagnosed with overweight or obesity in addition to a comorbidity for which there is an AOM indicated would be able to access an AOM specific to the comorbidity rather than to one indicated for chronic weight management. As a result, CHBRP did not assume any change in utilization for AOMs indicated for other conditions.

Benefit Coverage

CHBRP estimates that at baseline, nearly all of the 13.6 million Californians with health insurance subject to SB 535 has coverage for IBT (99.8% enrollees), bariatric surgery (99.7% enrollees), and at least one FDA-approved AOM. Specifically, 93.2% of enrollees have existing coverage for a non-GLP-1 AOM. Postmandate,

100% of these enrollees would have coverage for all three obesity treatments.

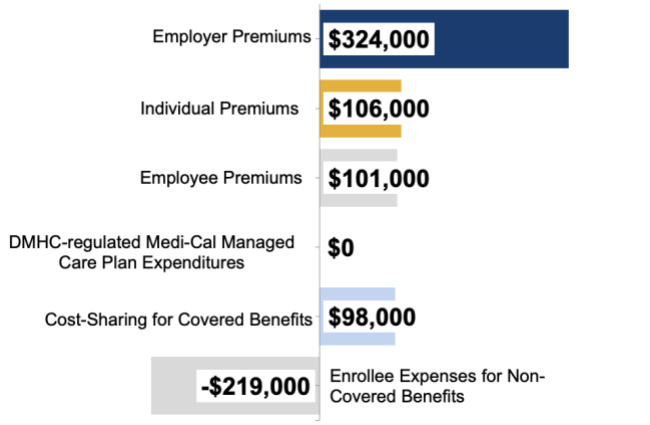
Utilization

At baseline, CHBRP estimates there are approximately 3.1 million enrollees with obesity and about 756,000 enrollees with overweight and comorbidities. CHBRP estimates zero enrollees utilize IBT and bariatric surgery without coverage; 42,813 enrollees use GLP-1s without coverage; and 2,023 use non–GLP-1 AOMs without coverage. Postmandate, CHBRP assumes there would be an additional 35 enrollees receiving IBT, and 4 undergoing bariatric surgery. There would be no increase in utilization of GLP-1 AOMs, but an additional 4,047 enrollees would use non–GLP-1 AOMs.

Expenditures

SB 535 would increase total premiums by approximately $530,000 and increase cost sharing by $98,000 each year. Noncovered expenses for enrollees would be reduced by about $220,000. No measurable offsets are projected.

Figure B. Expenditure Impacts of SB 535



Source: California Health Benefits Review Program, 2025.
Key: DMHC = Department of Managed Health Care.

Medi-Cal

There would be no impact on Medi-Cal expenditures as SB 535 only applies to group and individual health plans and policies; therefore, it does not apply to the health insurance of any Medi-Cal beneficiaries, including those in managed care plans regulated by DMHC.

CalPERS

For enrollees associated with California Public Employees' Retirement System (CalPERS) in DMHC-regulated plans, CHBRP estimates premiums would have no change.

Covered California – Individually Purchased

CHBRP estimates that premiums for DMHC-regulated individual market plans available through Covered California would increase by 0.0006%, whereas mirror plans available outside of Covered California would increase by 0.0002%.

Number of Uninsured in California

Because the change in average premiums does not exceed 1% for any market segment, CHBRP would expect no measurable change in the number of uninsured persons due to the enactment of SB 535.

Medical Effectiveness

CHBRP's medical literature review focused on determining the effectiveness of IBT, bariatric surgery, and FDA-approved AOMs indicated for chronic weight management on a reduction in the incidence of adult and adolescent obesity and associated health outcomes, compared with no intervention, or in conjunction with another treatment. CHBRP's review of AOMs included both GLP-1 medications and non–GLP-1 medications.

Measurable health outcomes relevant to SB 535 include primary outcomes such as change in body weight of 5%, 10%, 15%, or 20%, waist circumference, and mean BMI change. Additional health-related outcomes included diabetes risk, hemoglobin, systolic and diastolic blood pressure, and functional quality of life. CHBRP also reviewed literature on potential harms of FDA-approved AOMs and complications from bariatric surgery. The results of the literature review are as follows:

- Bariatric surgery:
  - *Very strong evidence*[3] that bariatric surgery is effective in reducing weight and improving related health outcomes compared to nonsurgical interventions in adults.
  - *Some evidence*[4] that bariatric surgery is effective in reducing weight in adolescents compared to similar adolescents who do not have surgery.
- FDA-approved AOMs:
  - *Very strong evidence* that use of both GLP-1 and non–GLP-1 AOMs combined with usual care (including diet and activity and lifestyle recommendations) results in greater weight loss than usual care alone in adults.
  - *Conflicting evidence* that GLP-1 and non-GLP-1 AOMs improve weight loss in children and adolescents.
- IBT:
  - *Very strong evidence* that IBT is effective in reducing weight and the risk of developing type 2 diabetes in adults.
  - *Very strong evidence* that IBT is effective for weight management and is associated with greater improvements in diabetes and blood pressure control in adolescents and children.

There are potential harms associated with bariatric surgery, including site infections, cholecystitis with pancreatitis, pouch dilations (requiring repositioning), pneumonia, severe headaches, hernias, bowel obstructions, and other gastrointestinal issues.

The potential harms associated with the use of FDA-approved AOMs include gastrointestinal-related symptoms, such as nausea, constipation, diarrhea, and dyspepsia (i.e., discomfort or pain in the upper abdomen); paresthesia (i.e., burning or prickling sensation often occurring in the hands, arms, legs, or feet); dry mouth; insomnia; irritability; anxiety; headache; and increased blood pressure and heart rate. Adverse events may contribute to discontinuation of the drug, which can impact the overall medical effectiveness of the treatment. It is unclear if long-term use is associated with more severe and persistent harms.

There are no serious harms associated with IBT.

Public Health

It is estimated that as a result of SB 535, utilization of obesity treatments would increase by 4,086 enrollees (4,047 utilizing FDA-approved AOMs; 4 receiving bariatric surgery; 35 receiving IBT for weight loss). As a result, these enrollees would experience a 3% to 14% reduction in body weight by and related health improvements, which is supported by evidence that obesity treatments are medically effective.

Long-Term Impacts

In the case of SB 535 CHBRP estimates approximately 4,086 enrollees would newly use treatments for obesity within 1-year postmandate. Public health impacts would be likely to accrue to these individuals outside of the 1-year time frame as they continue to lose and maintain their weight loss. CHBRP found limited evidence to evaluate the long-term benefits of obesity treatments. Therefore, although this limited evidence suggests that there would continue to be a reduction in the overall prevalence of obesity and obesity-related chronic disease, including a reduction in cardiovascular disease, hypertension (i.e., high blood pressure), type 2 diabetes, and certain types of cancer, the magnitude of these benefits is unknown.

Essential Health Benefits and the Affordable Care Act

The obesity treatments that are the subject of SB 535 are regularly covered under California's essential health benefit (EHB) benchmark plan, it seems unlikely that SB 535 would exceed the definition of EHBs in California.

[3] *Very strong evidence* indicates that there are multiple studies of a treatment, and the large majority of studies are of high quality and consistently find that the treatment is either effective or not effective. Conclusions are unlikely to be altered by additional evidence.

[4] *Some evidence* indicates that a small number of studies have limited generalizability to the population of interest and/or the studies have a serious methodological concern in research design or implementation. Conclusions could be altered with additional evidence.

About CHBRP

The California Health Benefits Review Program (CHBRP) was established in 2002. As per its authorizing statute, CHBRP provides the California Legislature with independent analysis of the medical, financial, and public health impacts of proposed health insurance benefit-related legislation.

The state funds CHBRP through an annual assessment on health plans and insurers in California.

An analytic staff based at the University of California, Berkeley, supports a task force of faculty and research staff from multiple University of California campuses to complete each CHBRP analysis. A strict conflict-of-interest policy ensures that the analyses are undertaken without bias. An independent actuarial firm, Milliman, helps to estimate the financial impact. Content experts with comprehensive subject-matter expertise are consulted to provide essential background and input on the analytic approach for each report.

More detailed information on CHBRP's analysis methodology, authorizing statute, as well as all CHBRP reports and other publications, are available at chbrp.org.

Suggested citation

California Health Benefits Review Program (CHBRP). (2025). *Analysis of California Senate Bill 535 Obesity Treatment Parity Act.* Berkeley, CA.

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Lists of Tables and Figures

Acronyms and Abbreviations

AB – Assembly Bill
ACA – Affordable Care Act
ACIP – Advisory Committee on Immunization Practices
AOM – anti-obesity medication
CA – California
CalPERS – California Public Employees' Retirement System
CDC – Centers for Disease Control and Prevention
CDI – California Department of Insurance
CHBRP – California Health Benefits Review Program
COHS – County Organized Health System
DHCS – Department of Health Care Services
DMHC – Department of Managed Health Care
EHB – essential health benefits
FDA – U.S. Food and Drug Administration
GLP-1 – glucagon-like peptide-1
HMO – Health Maintenance Organization
HRSA – Health Resources and Services Administration
IBT – intensive behavioral therapy
MHPAEA – Mental Health Parity and Addiction Equity Act
SB – Senate Bill
USPSTF – United States Preventive Services Task Force

Introduction

The Senate Committee on Health requested that the California Health Benefits Review Program (CHBRP)[5] conduct an evidence-based assessment of the medical, financial, and public health impacts of Senate Bill (SB) 535, Obesity Treatment Parity Act.

SB 535 Obesity Treatment Parity Act: Bill Language

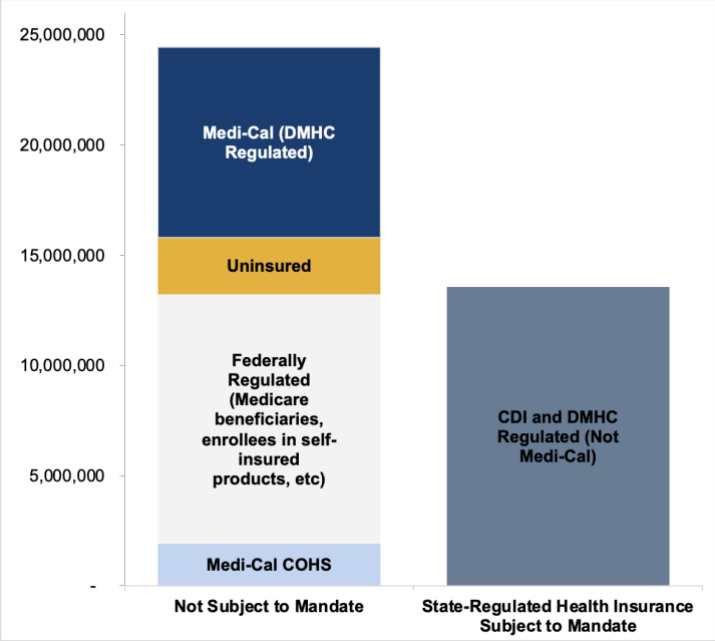
SB 535 would require coverage for intensive behavioral therapy (IBT), bariatric surgery, and at least one U.S. Food and Drug Administration (FDA)-approved anti-obesity medication (AOM) indicated for chronic weight management in patients with obesity. In addition, the bill would prohibit coverage criteria from being more restrictive than the U.S. Food and Drug Administration (FDA)-approved indications for those treatments. See the full text of SB 535 in Appendix A.

If enacted, SB 535 would apply to the health insurance of approximately 13.6 million enrollees (35.8% of all Californians) (see Figure 1).

- **Includes**: enrollees in commercial or California Public Employees' Retirement System (CalPERS) health insurance regulated by the Department of Managed Health Care (DMHC) and the California Department of Insurance (CDI).
- **Excludes**: Medi-Cal beneficiaries enrolled in DMHC-regulated plans or County Organized Health System (COHS) plans.

See the following *Analytic Approach and Key Assumptions* section for additional information.

Figure 1. Health Insurance in CA and SB 535



Source: California Health Benefits Review Program, 2025.
Note: CHBRP generally assumes alignment of Medi-Cal Managed Care plan benefits, with limited exceptions.[1]
Key: CDI = California Department of Insurance; COHS = County Organized Health System; DHCS = Department of Health Care Services; DMHC = Department of Managed Health Care.

What Is Obesity?

Obesity is a chronic health condition characterized by an increase in the size and amount of fat cells in the body (NIH, 2022). Health care providers screen for obesity by calculating patients' body mass index (BMI), which takes into account an individual's height and weight. There are many health consequences of obesity such as an increased risk of heart disease, diabetes, respiratory issues, musculoskeletal disorders, and certain cancers, as well as reduced life expectancy (NIH, 2023). Causes of obesity are multi-faceted and can include lifestyle habits, environment, stress, health conditions and certain medications, socioeconomic factors, and individual characteristics such as genetics and metabolism (CDC, 2024c).

There a several methods used to treat obesity, including behavioral and lifestyle changes, anti-obesity medications (AOMs), and surgery. SB 535 focuses on three treatment types: intensive behavioral therapy (IBT), bariatric surgery, and

[5] See CHBRP's authorizing statute.

AOMs. IBT is a particular form of behavioral intervention that is rigorous, structured, and involves multiple components. IBT typically lasts 1 to 2 years and provides patients with tools to support weight loss and maintenance of weight loss (e.g., food scales, pedometers). Bariatric surgery is a procedure conducted on the stomach or intestines to induce weight loss. AOMs can be broken into two types of drugs: glucagon-like peptide-1 (GLP-1) receptor agonists, and non–GLP-1 medications. GLP-1 medications are a class of drugs that activate the body's GLP-1 receptors. This activation triggers several downstream effects, including lowering glucose (sugar) levels within the bloodstream, reducing digestion rate, and increasing the sensation of fullness for longer (Zheng et al., 2024). GLP-1 medications are indicated for type 2 diabetes, obesity, among other conditions (Collins and Costello, 2024). Non–GLP-1 AOMs treat obesity through a variety of different mechanisms, including blocking fat absorption and deposition, suppressing appetite, and increasing metabolism (Aaseth et al, 2021; Verrotti et al., 2011).

Terminology

- **Anti-obesity medications (AOMs)**: refers to FDA-approved drugs that are indicated for chronic weight management in people with obesity. AOMs include GLP-1 and non–GLP-1 medications.

- **GLP-1 medications:** refers to glucagon-like peptide-1 receptor agonist backbone medications, which include GLP-1 receptor agonists and dual GLP-1/GIP receptor agonists.[6] Note that not all GLP-1 medications are applicable to SB 535. Those that are relevant include liraglutide (Saxenda), semaglutide (Wegovy), and tirzepatide (Zepbound).

- **Non–GLP-1 medications:** refers to non-peptide agonists of GLP-1 receptors.

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[6] Gastric inhibitory polypeptide (GIP) is a hormone that directly affects the pancreas, bone, fat, gastrointestinal tract, and brain (Seino et. al., 2010). GIPs contribute to the regulation of hunger sensation, among other metabolic functions (Ciardullo et. al., 2024)

Analytic Approach and Assumptions

CHBRP previously analyzed similar bill language, SB 839 in 2023, and SB 1008 in 2024. Where applicable, this analysis builds off those previous analyses.

Language Interpretation

- Because AB 575 specifies "group and individual" plans and policies, the health insurance of Medi-Cal beneficiaries enrolled in Department of Managed Health Care (DMHC)-regulated plans would not be subject to SB 535's requirements.[7]

- With regard to SB 535's coverage mandate for prescription drugs, the bill language specifies that plans and policies must cover at least one U.S. Food and Drug Administration (FDA)-approved AOM. The two main types of FDA-approved drugs indicated for chronic weight management are glucagon-like peptide-1s (GLP-1s) and non–GLP1 medications. CHBRP assumes a plan or policy would be in compliance with SB 535 if it covered either one GLP-1 or one non–GLP-1 medication, in addition to coverage for bariatric surgery and IBT.

Pharmacy Benefit Coverage

CHBRP has assumed that plans and policies that do not have coverage for outpatient prescription drugs or brand-name outpatient prescription drugs would not be required to do so for prescriptions with an FDA indication for chronic weight management. Almost all (96.2%) commercial/CalPERS enrollees in plans and policies regulated by DMHC or CDI have an outpatient pharmacy benefit regulated by DMHC or CDI that covers both generic and brand-name outpatient prescription medications.[8] Of the remaining commercial/California Public Employees' Retirement System (CalPERS) enrollees, 1.2% do not have a pharmacy benefit and 2.6% have a pharmacy benefit that is not regulated by DMHC or CDI. In other words, CHBRP assumes SB 535 would have no impact for plans without a regulated pharmacy benefit except for CalPERS, which is discussed in Appendix C.

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[7] Personal communication, Office of Legislative and Governmental Affairs, California Department of Health Care Services, November 2024.
[8] For more detail, please see CHBRP's resource, *Pharmacy Benefit Coverage in State-Regulated Health Insurance*.

Policy Context

Health benefit mandates may interact and align with the following state and federal mandates, programs, and policies.

California Law and Regulations

California has opted to cover anti-obesity medications (AOMs) for weight loss under its Medi-Cal program. Medi-Cal beneficiaries have coverage for GLP-1 medications with a U.S. Food and Drug Administration (FDA) indication for weight management.[9] Quantity limits and labeler restrictions[10] apply. Bariatric surgery and intensive behavioral therapy (IBT) are also covered as benefits under the Medi-Cal program.[11]

In addition, Californians with health insurance through Federal employment have coverage for obesity treatment that include drugs with an FDA indication for weight loss and bariatric/metabolic surgeries (OPM, 2023).

Preventive Services

Existing California law requires coverage for preventive services with an "A" or "B" recommendation from the United States Preventive Services Task Force (USPSTF) without cost sharing or prior authorization for enrollees in grandfathered and nongrandfathered plans and policies.[12,13] IBT for weight loss has a Grade "B" USPSTF recommendation (USPSTF, 2018).[14]

Current and Former Legislation

As mentioned above, California previously considered SB 839 (2023) and SB 1008 (2024), both of which would have required comprehensive coverage for obesity treatments, including FDA-approved drugs with an indication for chronic weight management, bariatric surgery, and intensive behavioral therapy. One primary difference between the two proposals was that SB 1008 would have required coverage of only one drug (either a GLP-1 or non–GLP-1 medication), whereas SB 839 would likely have required coverage of at least two drugs (one GLP-1 and one non–GLP-1 medication). The other major difference between the bills was related to cost sharing. SB 1008 was silent regarding cost sharing, whereas SB 839 would have required cost sharing for obesity treatments to not be different or separate from treatments for other illnesses, conditions, or disorders. SB 839 was held in the Assembly Health Committee without a hearing. SB 1008 was held in the Senate Appropriations Committee.

To date, one other legislative proposal related to obesity has been introduced in California during the current legislative session. AB 575 would require coverage for intensive behavioral therapy and at least one GLP-1, FDA-approved for the treatment or prevention of obesity. AB 575 has been referred to the Assembly Health Committee. CHBRP is conducting a concurrent analysis of AB 575, per the request of the Assembly Health Committee.[15] By contrast, SB 535 would allow for health plans and insurance policies to comply by covering one non-GLP-1 medication and would not compel them to cover any GLP-1 medication options.

[9] See Medi-Cal Rx Contract Drugs List as of April 1, 2025.
[10] Labeler restriction means the brand name (specific labeler) version of the drug must be used on the claim, rather than the generic alternative, for the claim to be paid.
[11] See DHCS Essential Health Benefits.
[12] HSC 1367.002; INS 10112.2.
[13] More information about the state and federal requirements to cover specified preventive services is included in CHBRP's resource, *Federal Recommendations and the California and Federal Preventive Services Benefit Mandates*.
[14] As of the date of publication of this analysis, the USPSTF was updating its recommendation statement related to behavioral interventions for weight loss to prevent obesity-related morbidity and mortality in adults.
[15] See CHBRP's website for all completed analyses.

Similar Legislation in Other States

Nine states have introduced legislation in the past year that would require coverage for one or more obesity treatments, including IBT, bariatric surgery, and/or AOMs (Table 1). Connecticut, Iowa, and West Virginia are considering legislation that would require a committee or state agency to review the use of AOMs.[16]

Table 1. Legislation Requiring Coverage for Obesity Treatment in Other States, 2025.

State	Intensive Behavioral Therapy	Bariatric Surgery	FDA-Approved Anti-Obesity Medications	Commercial or Medicaid Mandate
Arkansas			X (a)	Both
Colorado	X	X	X	Commercial only
Connecticut		X	X	Both (b)
Florida	X	X	X	Medicaid only
Indiana	X	X	X	Both
Maine			X (a)	Both
Maryland			X	Both
Minnesota	X	X	X	Both
Mississippi		X	X	Commercial
Nevada	X	X		Both
New Jersey			X	Both
New Mexico			X (a)	Commercial
New York	X	X	X	Both
North Dakota			X	Both
Oregon	X	X	X	Both
Pennsylvania	X	X	X	Medicaid only
Texas	X	X	X (a)	Both (c)
Washington	X	X	X	Both
West Virginia			X (a)	Commercial only

Source: California Health Benefits Review Program, 2025 via LegiScan search. Data as of March 2025.[17]
Notes: (a) Coverage is required explicitly for GLP-1 drugs.
(b) Coverage requirement for FDA-approved anti-obesity medications is only proposed for Medicaid coverage.
(c) Coverage requirement for all treatments under Medicaid program; proposal to cover GLP-1 drugs only for commercial plans.
Key: FDA = U.S. Food and Drug Administration; GLP = glucagon-like peptide.

[16] Connecticut SB01421; Iowa HF701, HSB209, SSB1138, SF552; West Virginia SB253.
[17] Arkansas House Bill (HB) 1332 and HB1424; Colorado Senate Bill (SB)048; Connecticut SB01474, SB00683, and SB01000; Florida S0648 and H0713; Indiana HB1138, HB1202, and HB1552; Maine LD627 and LD480; Maryland SB876, HB1489, HB1031; Minnesota HF690 and SF1053; Mississippi HB360; Nevada AB399 and SB244; New Mexico SB193; New Jersey A1207, S2554, A1891, S2448; New York S03104, A02715, SB876, A04211,S05798; North Dakota HB1451 and HB1452; Oregon HB3517; Pennsylvania SB271; Texas SB2729, HB2677, and HB2412; Washington HB1326 and SB5353; West Virginia HB2912.

Federal Policy Landscape

Federal law authorizes the Medicaid Drug Rebate Program (MDRP), a program designed to help offset federal and state costs of most outpatient prescription drugs dispensed to Medicaid beneficiaries. The program is collaboration between the Centers for Medicare & Medicaid Services (CMS), state Medicaid agencies, and participating drug manufacturers. MDRP requires a drug manufacturer to enter into a written agreement with the Secretary of the Department of Health and Human Services that it will provide a rebate to states for a portion of the Medicaid payment for each drug. The states then share the rebate with the federal government. In return, most of the manufacturer's drugs are covered under state Medicaid programs (CMS, 2025a). Some drugs or classes of drugs may be excluded from coverage under the MDRP, including drugs used for weight loss.[18] This means that states can decide whether to include coverage for obesity drugs in their Medicaid program. As of August 2024, 13 states covered GLP-1's for obesity treatment under their Medicaid programs, including California (Williams, et. al., 2024).

Medicaid beneficiaries under the age of 21 years also qualify for the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit, which provides comprehensive and preventive health care services. The EPSDT benefit includes services to prevent and reduce obesity, including BMI screening, education and counseling on nutrition and physical activity, prescription drugs that promote weight loss, and as appropriate, bariatric surgery (CMS, 2025b).

Affordable Care Act

A number of Affordable Care Act (ACA) provisions have the potential to or do interact with state benefit mandates. Below is an analysis of how SB 535 may interact with requirements of the ACA as presently exist in federal law, including the requirement for certain health insurance to cover essential health benefits (EHBs).[19,20]

Essential health benefits

In California, nongrandfathered[21] individual and small-group health insurance is generally required to cover EHBs.[22] In 2026, approximately 11% of all Californians will be enrolled in a plan or policy that must cover EHBs.[23]

States may require state-regulated health insurance to offer benefits that exceed EHBs.[24,25,26] Should California do so, the state could be required to defray the cost of additionally mandated benefits for enrollees in health plans or policies purchased through Covered California, the state's health insurance marketplace. However, state benefit mandates specifying provider types, cost sharing, or other details of existing benefit coverage would not meet the definition of state benefit mandates that could exceed EHBs.[27,28]

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[18] 42 U.S. Code § 1396r–8 - Payment for covered outpatient drugs.
[19] The ACA requires nongrandfathered small-group and individual market health insurance – including, but not limited to, qualified health plans sold in Covered California – to cover 10 specified categories of EHBs. Policy and issue briefs on EHBs and other ACA impacts are available on the CHBRP website.
[20] Although many provisions of the ACA have been codified in California law, the ACA was established by the federal government, and therefore, CHBRP generally discusses the ACA as a federal law.
[21] A grandfathered health plan is "a group health plan that was created – or an individual health insurance policy that was purchased – on or before March 23, 2010. Plans or policies may lose their 'grandfathered' status if they make certain significant changes that reduce benefits or increase costs to consumers."
[22] For more detail, see CHBRP's issue brief, *Essential Health Benefits: An Overview of Benefits, Benchmark Plan Options, and EHBs in California*.
[23] See CHBRP's resource, *Sources of Health Insurance in California*.
[24] ACA Section 1311(d)(3).
[25] State benefit mandates enacted on or before December 31, 2011, may be included in a state's EHBs, according to the U.S. Department of Health and Human Services (HHS). Patient Protection and Affordable Care Act; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation. Final Rule. Federal Register, Vol. 78, No. 37. February 25, 2013.
[26] However, as laid out in the Final Rule on EHBs U.S. Department of Health and Human Services (HHS) released in February 2013, state benefit mandates enacted on or before December 31, 2011, would be included in the state's EHBs, and there would be no requirement that the state defray the costs of those state-mandated benefits. For state benefit mandates enacted after December 31, 2011, that are identified as exceeding EHBs, the state would be required to defray the cost.
[27] Essential Health Benefits. Final Rule. A state's health insurance marketplace would be responsible for determining when a state benefit mandate exceeds EHBs, and qualified health plan issuers would be responsible for calculating the cost that must be defrayed. Patient Protection and Affordable Care Act; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation. Final Rule. Federal Register, Vol. 78, No. 37. February 25, 2013.
[28] Both Massachusetts and Utah currently pay defrayment costs for exceeding EHBs. For more information about defrayal, refer to CHBRP's issue brief *Essential Health Benefits: Exceeding EHBs and the Defrayal Requirement*.

As the drugs, bariatric surgery, and behavioral therapy that are the focus of this analysis are regularly covered under the EHB benchmark plan, it seems unlikely that SB 535 would exceed the definition of EHBs in California.

Other Federal or State Programs

The Centers for Disease Control and Prevention (CDC) currently funds 16 land grant universities to run the High Obesity Program, a 5-year cooperative agreement intended to reduce health disparities in mostly rural counties with adult obesity rates higher than 40%. The current program began in 2023 and focuses on increasing food and nutrition security, increasing physical activity through community design, and early care and education settings. No universities in the state of California were awarded funding under the current High Obesity Program (CDC, 2025).

CDC also currently funds 17 states to conduct the current 5-year State Physical Activity and Nutrition program, which aims to make healthy eating and active living more accessible through the implementation of evidence-based strategies to promote food service and nutrition guidelines, for safe and accessible physical activity, for continuity of care in breastfeeding support, and early care and education settings (CDC, 2024d). The California Department of Public Health was a recipient of State Physical Activity and Nutrition program funding for fiscal year 2024.

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Background on Obesity

SB 535 would require an individual or group health care service plan contract or health insurance policy that provides coverage to include coverage for at least one U.S. Food and Drug Administration (FDA)-approved anti-obesity medication (AOM), intensive behavioral therapy (IBT), and bariatric surgery for the treatment of obesity. This background section provides information related to obesity to provide context for the consideration of the *Medical Effectiveness*; *Benefit Coverage, Utilization, and Cost Impacts*; and *Public Health Impacts* sections.

Obesity is a chronic health condition characterized by an increase in the size and amount of fat cells in the body (NIH, 2022). Health care providers screen for obesity by calculating patients' body mass index (BMI), which takes into account an individual's height and weight. Adults with a BMI of 25 to <30 are categorized as overweight and those with a BMI of 30 or higher are categorized as obese. The adult obese category can be further delineated into three categories (CDC, 2024a):

- Class 1: BMI of 30 to <35
- Class 2: BMI of 35 to <40
- Class 3: BMI of 40 or higher

In children, BMI categories to define overweight and obesity are defined based on sex-specific BMI-for-age percentiles. The BMI categories for children and teens aged 2-19 are provided below (CDC, 2024b):

- Underweight: BMI in <5th percentile
- Healthy Weight: BMI in 5th-<85th percentile
- Overweight: BMI in 85th percentile – <95th percentile
- Obesity: BMI in 95th percentile or greater
- Severe Obesity: BMI in 120% of the 95th percentile or greater or 35 kg/m^2 or greater

Table 2 describes the prevalence of overweight and obesity in the privately insured population in California by age. Obesity treatments are recommended for individuals with obesity, as well as for some who are overweight (i.e., individuals with BMI ≥27 to <30) and have comorbidities such as cardiovascular disease, type 2 diabetes, and hypertension (Jensen et al., 2014). Data in Table 2 show patterns in overweight and obesity by age, with rates increasing with age. Overall, it is estimated that 10.0% of adolescents aged 12 to 17 years and 27.5% of adults aged 18 to 64 years with private health insurance in California have BMIs that would categorize them as having obesity.

Table 2. Prevalence of Overweight and Obesity in California's Privately Insured Population by Age, 2023

Age, Years	Overweight, % (a) (BMI 25.0 to <30)	Obese, % (BMI ≥30)
12-17 (b)	15.3	10.0
18-24	23.7	16.4
25-39	30.3	24.9
40-64	34.4	31.9
18-64 (c)	31.6	27.5

Source: California Health Benefits Review Program, 2025, analysis of the 2023 California Health Interview Survey Data.

Analysis was limited to respondents with employment-based and privately purchased health insurance.
Note: (a) A proportion of those who have BMIs between 27 and 29.9 would also be eligible for obesity treatments if they have additional comorbidities. This has been estimated to be 7% of the privately insured non-elderly adult population (McGough et. al., 2024).
(b) Overweight for children under age 18 years is defined as having a BMI between the 85th and 95th percentile, whereas obesity is defined as having a BMI in the 95th percentile or above (CDC, 2024b). Estimates for teens (aged 12-17 years) are presented because the data source did not include information on obesity rates for children aged 0 to 12 years.
(c) In addition, rates for adults >65 years are not presented because the vast majority of that population is enrolled in Medicare and thus not enrolled in health insurance subject to SB 535.
Key: BMI = body mass index.

In addition, it is estimated that 7% of adult Californians with health insurance subject to SB 535 would also be medically eligible for treatment due to having BMIs ≥27 and <30 and the presence of comorbidities (McGough et. al., 2024). This translates into an additional 200,000 Californians eligible for obesity treatments enrolled in health insurance subject to SB 535, for a total of 3.1 million (Table 3). For example, among those who have BMIs between 27 and 30, 8.4% have ever been diagnosed with diabetes, 3.8% have heart disease and 15.4% have ever been diagnosed with high blood pressure.

Table 3. Prevalence of Diabetes, Heart Disease, and High Blood Pressure Among Overweight and Obese Adults Aged 18-64 Years in California's Privately Insured Population, 2023

	Overweight, %* (BMI 27 to <30)	Obese, % (BMI ≥30)
Ever diagnosed with diabetes	8.4	14.1
Has heart disease	3.8	3.6
Blood pressure not under control in the past year	15.4	11.2

Source: California Health Benefits Review Program, 2025, analysis of the 2023 California Health Interview Survey Data.
Analysis is limited to respondents with employment-based and privately purchased health insurance.
Note: * A proportion of those who have BMIs between 27 and 29.9 would also be eligible for obesity treatments if they have additional comorbidities. This has been estimated to be 7% of the total, non-elderly adult population with private insurance (McGough et. al., 2024).
Key: BMI = body mass index.

Treatments for Obesity Weight Management

There are three types of treatments for obesity that are relevant to SB 535: FDA-approved AOMs, bariatric surgery, and IBT (Cornier, 2022). Selection of treatments should take into consideration patient preference, individual patient characteristics, and the implications for patients with multiple comorbidities. A description and summary of clinical practice guidelines for each type of treatment is described in more detail below.

Drugs With FDA Indication for Chronic Weight Management

There are two main types of drugs approved by the FDA with an indication for chronic weight management – known as AOMs: glucagon-like peptide 1 (GLP-1) receptor agonists and non–GLP-1s. Non-GLP-1 anti-obesity medications were developed and introduced to the market primarily for the treatment of obesity as early as the 1950s. One such medication, phentermine, was approved by the FDA in 1959 and remains in use today. In contrast, GLP-1 receptor agonists were first discovered in 1984 and initially approved by the FDA in 2005 for the treatment of type 2 diabetes. It wasn't until 2014 that the FDA approved Saxenda (liraglutide) as the first GLP-1 specifically indicated for weight management. As of March 2025, there are eight different FDA-approved GLP-1 medications of which three are FDA-approved specifically for the treatment of obesity. In addition there are four non–GLP-1s with FDA indications for chronic weight management. Table 4 displays the drugs relevant to SB 535: 1) GLP-1 medications that are FDA-approved for chronic weight management and 2) non–GLP-1 medications that are FDA-approved for the treatment of obesity. The drugs that are specific to SB 535 (i.e. those with an FDA indication for chronic weight management) are the AOMs for chronic weight management (both GLP-1s and non–GLP-1s) but not GLP-1s FDA-approved for the treatment of type 2 diabetes such as Ozempic or Mounjaro as

indicated in Table 4 below. The drug name, brand name, year of FDA approval, mode of administration, and population for which the drug is approved are also presented in the table.

Table 4. FDA-Approved Drugs for Weight Management Relevant to SB 535, as of March 2025

Drug (Brand Name)	FDA Approval Year	Frequency/Mode of Administration	Population Approved/ Indicated For
GLP-1 FDA-approved for chronic weight management (a)			
Liraglutide (Saxenda)	2014 adults; 2020 aged 12+ years	Daily, subcutaneous	Adults with BMI of ≥30 kg/m^2 or ≥27 kg/m^2 with comorbid condition (e.g., hypertension, type 2 diabetes mellitus, or dyslipidemia). 12+ years with body weight above 60 kg and an initial BMI corresponding to 30 kg/m^2 for adults by international cut-offs.
Semaglutide (Wegovy)	2021 adults; 2023 aged 12+	Weekly, subcutaneous, gradually increase dose every 4 weeks.	Adults with BMI ≥30 kg/m^2 or ≥27 kg/m^2 in the presence of comorbid condition. 12+ years with BMI at the 95th percentile or greater standardized for age and sex.
Tirzepatide (Zepbound) (b)	2023	Weekly, subcutaneous	Adults with BMI ≥30 kg/m^2 or ≥27 kg/m^2 with comorbid condition.
Non–GLP-1 FDA-approved for chronic weight management			
Bupropion/ naltrexone (Contrave)	2014	Daily orally. Dose is increased weekly until target dosage of two tablets twice daily.	Adults with an initial BMI of ≥30 kg/m^2 or ≥27 kg/m^2 with weight-related comorbid condition.
Orlistat (Xenical, Alli)	1999	Daily orally	Adults with BMI of ≥30 kg/m^2 or a BMI of ≥27 kg/m^2 in the presence of other comorbidities.
Phentermine/ Topiramate (Qsymia)	2012	Daily orally	Adults with BMI of ≥30 kg/m^2 or ≥27 kg/m^2 with weight-related comorbid condition. Pediatric patients aged 12 years and older with BMI in the 95th percentile or greater.
Phentermine (c) (Adipex-P, Lomaira)	1959	Daily orally; approved by the FDA for short-term use (3 months)	Age 16+ years with BMI of 30 kg/m^2 or greater or 27 kg/m^2 or greater) in the presence of at least one weight-related comorbid condition.

Source: California Health Benefits Review Program, 2025; FDA, 2025a.
Note: (a) While SB 535 could apply to GLP-1s, as described in the *Benefit Coverage, Utilization and Cost Impacts* section, it is not anticipated that SB 535 will lead to an increase in utilization of these drugs.
(b) Tirzepatide (Zepbound) is a dual glucose-dependent insulinotropic polypeptide (GIP)/GLP-1.
(c) FDA-approval is for short-term use in a regimen of chronic weight management including exercise, behavioral modification, and caloric restriction.
Key: BMI = body mass index; FDA = U.S. Food and Drug Administration; GLP-1 = glucagon-like peptide-1.

GLP-1s work by activating GLP-1 receptors in the body, which slows down how quickly food moves through the body and increases the sensation of fullness for longer (Ard et al., 2021). Non–GLP-1 therapies involve many different mechanisms of action such as reduction of absorption of fat (orlistat), reduction in the deposition of fat (phentermine), and suppression of appetite (bupropion/naltrexone, naltrexone) (Aaseth et al., 2021; Verrotti et al., 2011).

A recent poll found that 12% of U.S. adults have used a GLP-1 medication, with 6% currently taking one (Montero et. al., 2024). Among users, 39% took them for chronic conditions such as diabetes or heart disease, whereas 38% used them primarily for weight loss, and 23% used them to both lose weight and to treat a chronic condition (Montero et. al., 2024).

Specifically, GLP-1 usage was 43% among those with diabetes, 26% among those with heart disease, and 22% among individuals classified as overweight or obese (Montero et. al., 2024).

Distribution of GLP-1s and the role of compounding pharmacies

Compounding pharmacies are a specialized type of pharmacy that combines, mixes, or alters ingredients of a drug to create a medication that is tailored to specific patient needs (FDA, 2024). Compounding pharmacies are not FDA approved, but they are permitted to replicate commercially available drugs when the active ingredients are listed on the FDA's drug shortage list (NCSL, 2024). Three GLP-1s FDA-approved to treat obesity (liraglutide, semaglutide, and tirzepatide) were previously on the FDA's drug shortage list, but as of March 2025, these shortages have been deemed resolved by the FDA (FDA, 2025b). As a result, compounding pharmacies have been asked to stop producing and selling these drugs (FDA, 2025b). Therefore, this analysis will assume that enrollees are no longer getting these drugs through compounding pharmacies.

Clinical practice guidelines for adults

In 2018, the United States Preventive Services Task Force (USPSTF) recommended that clinicians promote behavioral interventions as the primary intervention for weight management in adults (USPSTF, 2018). Multiple additional studies of weight management drugs have been published since the USPSTF systematic review was published in 2018 recommending behavioral interventions as the first line of therapy. The 2022 American Gastroenterological Association *Clinical Practice Guidelines on Pharmacological Interventions for Adults With Obesity* recommends the use of pharmacotherapy in addition to lifestyle modifications in adults with overweight or obesity who have inadequate response to lifestyle interventions (Grunvald et al., 2022). In addition this guideline recommends that semaglutide 2.4 mg be prioritized over other AOMs.

Guidance on weight management drugs for children and adolescents

In 2023, the American Academy of Pediatrics (AAP) issued a clinical practice guideline regarding weight management drugs for children and adolescents with obesity that states "Pediatricians and other pediatric health care providers should offer adolescents 12 years and older with obesity (BMI ≥ 95th percentile) weight loss pharmacotherapy, according to medication indications, risks, and benefits, as an adjunct to health behavior and lifestyle treatment" (Hampl et al., 2023).

Bariatric Surgery

There are five different surgeries used to treat obesity relevant to SB 535. The surgery type, procedure description, and mechanism of action and intended clinical effect are presented in Table 5 below.

Table 5. Bariatric Surgeries Relevant to SB 535

Surgery Type	Procedure Description	Mechanism of Action (i.e., How It Works)
Sleeve gastrectomy	Removes approximately 80% of the stomach.	Reduces the stomach size, limiting food intake and removes the portion of the stomach that produces the "hunger hormone."
Roux-en-Y gastric bypass (RYGB)	Stomach is divided into a smaller pouch (size of an egg), and the small intestine is rerouted.	Reduces stomach size, limits food intake and decreases food absorption in the small intestine.
Adjustable gastric band (AGB)	Silicone band placed around the top of the stomach.	Adjusted band size may impact the feeling of fullness. The band can be adjusted or removed if needed.

Surgery Type	Procedure Description	Mechanism of Action (i.e., How It Works)
Biliopancreatic diversion with duodenal switch (BPD/DS)	A tube-shaped stomach pouch is created, bypassing most of the small intestine.	Reduces stomach size, limiting food intake; 75% of the small intestine is bypassed, which can impact intestinal hormones and hunger.
Single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S)	Similar to BPD-DS, with a simpler and faster procedure.	Creates a smaller tube-shaped stomach and connects it to the latter part of the small intestine.

Source: Eisenberg et al., 2023.

Guidance on bariatric surgery for adults

The American Society for Metabolic and Bariatric Surgery/International Federation for the Surgery of Obesity and Metabolic Disorders (ASMBS/IFSO) Guidelines published in 2022 recommend metabolic and bariatric surgery for individuals with a BMI of 35 or more "regardless of presence, absence, or severity of obesity-related conditions" and that it be considered for people with a BMI of 30 to 34.9 and metabolic disease (Eisenberg et al., 2023).

Guidance on bariatric surgery for children and adolescents

In 2023, the AAP issued a clinical practice guideline regarding bariatric surgery for children and adolescents with obesity that states "Pediatricians and other pediatric health care providers should offer referral for adolescents 13 years and older with severe obesity (BMI ≥ 120% of the 95th percentile for age and sex) for evaluation for metabolic and bariatric surgery to local or regional comprehensive multidisciplinary pediatric metabolic and bariatric surgery centers" (Hampl et al., 2023).

Intensive Behavioral Therapy

The USPSTF defines intensive behavioral therapy (IBT) for obesity as a particular form of intensive, multicomponent behavioral intervention that typically lasts for 1 to 2 years, encompasses 12 or more sessions during the first year, and provides patients with tools to support weight loss and maintenance of weight loss (e.g., food scales, pedometers) (USPSTF, 2018). Many IBTs are modeled after the Diabetes Prevention Program (USPSTF, 2018). This program includes weekly group meetings led by a trained lifestyle coach for 6 months, followed by 6 months of meeting once or twice a month. The Diabetes Prevention Program curriculum is offered through a variety of organizations across the United States that are part of the Centers for Disease Control and Prevention's (CDC's) national registry of recognized organizations (CDC, 2023b).

Guidance on IBT for adults

In 2018, the USPSTF recommended that "clinicians offer or refer adults with a body mass index of 30 or higher to intensive, multicomponent behavioral interventions." The USPSTF (2018) concluded that effective behavioral intervention for weight loss has the following characteristics:

- Designed to help participants achieve or maintain a ≥5% weight loss through a combination of dietary changes and increased physical activity;
- Lasted for 1 to 2 years, and, in the majority of cases, had ≥12 sessions in the first year;
- Focused on problem solving to identify barriers to weight loss, self-monitoring of weight, peer support, and relapse prevention; and
- Provided tools to support weight loss or weight loss maintenance (e.g., pedometers, food scales, or exercise videos).

Guidance on IBT for children and adolescents

In 2023, the AAP issued a clinical practice guideline regarding IBT[29] for children and adolescents with obesity that states "Pediatricians and other pediatric health care providers should provide or refer children 6 years and older and may provide or refer children 2 through 5 years of age with overweight (BMI ≥ 85th percentile to < 95th percentile) and obesity (BMI ≥ 95th percentile) to health behavior and lifestyle treatment" (Hampl et al., 2023).

Disparities[30] in Obesity Prevalence and Treatment

Disparities are noticeable and preventable or modifiable differences between groups of people. Health insurance benefit mandates or related legislation may impact disparities. Where intersections between health insurance benefit mandates and social drivers or systemic factors exist, CHBRP describes relevant literature. CHBRP found literature identifying disparities by race/ethnicity, income, and geography.

Table 6 demonstrates patterns in overweight and obesity by key demographics among California adults. Obesity rates are lowest among those with the highest incomes and educational attainment. Rates of obesity vary in California by race and ethnicity with Asian adults reporting the lowest rates of obesity (11.0%) followed by White adults (25.5%), and American Indian/Alaska Native adults (42%), with Black adults (42.7%), and Latino adults (43.3%) all reporting the highest rates. In addition, adults residing in urban locations reported lower rates of obesity compared to adults residing in rural locations. Finally, rates of obesity did not vary significantly by gender or sexual orientation.

Table 6. Prevalence of Overweight and Obesity Among California Adults (18-64 Years) by Key Demographic Characteristics, 2023

Demographic Characteristic	Overweight, % [a] (BMI 25.0 - <30)	Obese, % (BMI ≥30)
Race/ethnicity		
American Indian/Alaska Native	35.1	25.3
Asian	28.9	11.0
Black	31.4	42.7
Latino	33.0	43.3
White	32.2	25.5
Gender[31]		
Female	25.6	27.3
Male	37.6	27.8
Transgender or gender nonconforming	21.8	20.1
Sexual orientation		
Straight/heterosexual	32.4	27.7
Gay, lesbian, bisexual, asexual	25.9	27.6
Federal poverty level		
0%-99%	30.1	31.6

[29] The American Academy of Pediatrics uses the terminology "intensive health behavior treatment."
[30] Several competing definitions of "health disparities" exist. CHBRP relies on the following definition: Health disparity is defined as the differences, whether unjust or not, in health status or outcomes within a population. (Wyatt et al., 2016).
[31] CHBRP uses the NIH distinction between "sex" and "gender": "'Sex' refers to biological differences between females and males, including chromosomes, sex organs, and endogenous hormonal profiles. 'Gender' refers to socially constructed and enacted roles and behaviors which occur in a historical and cultural context and vary across societies and over time." (NIH, 2019).

Demographic Characteristic	Overweight, % [a] (BMI 25.0 - <30)	Obese, % (BMI ≥30)
100%-199%	32.8	35.0
200%-299%	29.9	35.5
300%+	31.9	25.5
Location of residence		
Urban	31.8	27.0
Rural	31.1	33.4
Education		
<High school	33.3	38.5
High school graduate	28.4	34.5
Some college/vocational school	31.7	35.4
College graduate	32.6	21.8

Source: California Health Benefits Review Program, 2025, analysis of 2023 California Health Interview Survey Data.
Note: (a) A proportion of those who have BMIs between 27 and 29.9 would also be eligible for obesity treatments if they have additional comorbidities. This has been estimated to be 7% of the privately insured non-elderly adult population (McGough et. al., 2024).
(b) Overweight for children under age 18 years is defined as having a BMI between the 85th and 95th percentile, whereas obesity is defined as having a BMI in the 95th percentile or above (NIH, 2022).
Key: BMI = body mass index.

Barriers to Accessing Obesity Treatments

It is estimated that only 10% of those with obesity seek help from a professional to lose weight, with approximately 6.4% consulting a non-physician health professional (dietician, personal trainer, etc.) and 3.6% consulting a physician (Stokes et al., 2018). While not everyone with obesity is diagnosed and attempts to seek treatments, among those who do, there are still many factors that serve as barriers to accessing treatments such as:

- **Stigma:** People with obesity often face stigma and discrimination, which make them less likely to engage with the health care system. In addition, physicians may negatively stereotype patients with higher BMIs resulting in a lower likelihood of recommending treatments (Washington et al., 2023). Furthermore, concerns about the unintentional stigmatization of patients and maintaining the patient–provider relationship may further contribute to reluctance among providers to address obesity as an issue (Mekonnen et al., 2024).
- **Racism and discrimination**: People of color have higher rates of obesity. This is in part because they are more likely to live in neighborhoods with obesogenic food environments (Washington et al., 2023). Black and Latino adults are also more likely to develop an obesity-related disease such as high blood pressure, heart attack, and stroke (Washington et al., 2023). In addition to there being disparities in obesity rates by race and ethnicity, there are also disparities in access to anti-obesity treatments and outcomes. Specifically, it was found that Black and Hispanic adults with obesity were more likely to have financial barriers to accessing GLP-1s and were less likely to receive prescriptions compared to White adults (Lu et al., 2022). Furthermore, people of color who have obesity are less likely to be assessed for and diagnosed with obesity and offered treatments for obesity (Gasoyan et al., 2024; Washington et al., 2023).
- **Location:** Rates of obesity are higher among rural adults (31.0%) compared to urban adults (25.2%). In addition, the concentration of obesity medicine specialists in more urban and suburban areas makes it more difficult for adults diagnosed with obesity in rural areas to access care. People living in rural areas are more likely to face challenges in finding a health care provider that specializes in obesity medicine and are likely to live further away from major surgery centers. It is estimated that the travel time to an obesity medicine specialist is almost five times as long for adults in rural areas compared to adults in urban areas (43 vs. 9 minutes) (Washington et al., 2023).

- **Comorbidity factors**: A recent study suggests that most patients seek treatment for obesity-related comorbidities such as type 2 diabetes and cardiovascular disease rather than for obesity itself, leading providers to prioritize these conditions instead (Aboueid et al., 2018; Hersch et al., 2021).
- **Expense:** The high cost of some obesity treatments can make them inaccessible for patients with lower incomes (Levi et al., 2023). As shown in Table 6, those in the highest income group (>300% FPL) have much lower rates of obesity than those in the lower income groups. This is in part because people with lower incomes are more likely to find it challenging to address lifestyle factors contributing to obesity such as a lack of time and money to dedicate to healthy meal preparation and exercise, a higher likelihood of living in a built environment that is not conducive to eating healthy and exercising, and a higher likelihood of experiencing stress (Washington et al., 2023). More than half (54%) of those who have taken GLP-1 drugs found them difficult to afford, even with insurance covering part of the expense (Montero et. al., 2024).

Societal Impact of Obesity in the United States and California

The treatment of obesity-related diseases places a large economic burden on society. In a report by the Milken Institute, researchers estimated that the total economic costs attributed to overweight and obesity in the United States exceeded $1.72 trillion — comprising $480.7 billion in direct health care costs due to diseases caused by overweight and obesity, and an additional $1.24 trillion in indirect costs due to lost productivity in 2016 (Waters and Graf, 2018). Translated into 2025 dollars,[32] the total direct and indirect costs related to overweight and obesity equate to $2.3 trillion per year in the United States.

When evaluating direct medical care costs attributed to obesity in the United States, Cawley et al. (2021a) found that the annual average medical expenditures for adults with obesity ($5,010) were approximately twice as high at those incurred by adults with normal weight ($2,504). In addition, obesity increased costs within every level of medical care (i.e., inpatient, outpatient, and medications). Furthermore, Cawley et al. (2021a) found that as the class of obesity increased (Class 1, 2, and 3), so did the amount of annual medical expenditures. Relative to those with normal weight (BMI 18.5 to $\leq$25), additional medical expenditures increased by 68.4% (or $1,713) among those with class 1 obesity, by 120% (or $3,005) among those with class 2 obesity, and by 233.6% (or $5,850) among those with class 3 obesity, respectively.

Within California, Cawley et al. (2021a) estimated the total annual medical expenditure related to adult obesity (i.e., BMI $\geq$30). In 2016, the total annual medical care expenditures (i.e., direct costs comprised of public and private health insurance expenditures as well as out-of-pocket costs) due to obesity in California was equal to $5.3 billion (Cawley et al., 2021a). Translated into 2025 dollars, the total medical expenditures attributed to obesity in California is equal to $7.1 billion.

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[32] Translated into 2025 dollars using https://www.usinflationcalculator.com/.

Medical Effectiveness

As discussed in the *Policy Context* section, SB 535 would mandate coverage of intensive behavioral therapy (IBT), bariatric surgery, and at least one U.S. Food and Drug Administration (FDA)-approved anti-obesity medication (AOM) indicated for chronic weight management in patients with obesity. In addition, the bill would prohibit coverage criteria from being more restrictive than the FDA-approved indications for those treatments. Additional information on obesity and treatments is included in the *Background on Obesity* section. The medical effectiveness review summarizes findings from evidence[33] on IBT, bariatric surgery, and FDA-approved AOMs indicated for chronic weight management (both glucagon-like peptide-1 [GLP-1] receptor agonists and non–GLP-1s) in patients with obesity.

Research Approach and Methods

The search was limited to studies published from 2024 to the present because CHBRP had previously conducted thorough literature searches on these topics in 2023 for SB 839 and in 2024 for SB 1008.[34] Study findings included in the CHBRP publications for SB 839 and SB 1008 are included in this report to provide a comprehensive review of the literature on these topics and to support the new evidence presented.

A total of 32 studies were included in the medical effectiveness review for this report. The other articles were eliminated because they did not focus on the treatments for which SB 535 would require coverage, assessed medications that are not FDA-approved for chronic weight management, were of poor quality, did not report findings from clinical research studies, or did not report weight-related outcomes. A more thorough description of the methods used to conduct the medical effectiveness review and the process used to grade the evidence for each outcome measure is presented in CHBRP's Medical Effectiveness Analysis and Research Approach document.

The conclusions below are based on the best available evidence from peer-reviewed and grey literature.[35] Unpublished studies are not reviewed because the results of such studies, if they exist, cannot be obtained within the 60-day timeframe for CHBRP reports.

Key Questions

1. In adults and adolescents with obesity, what is the effect of IBT, bariatric surgery, and FDA-approved AOMs on a reduction in the incidence of adult and adolescent obesity compared with no intervention or in conjunction with another treatment?
2. What is the effect of IBT, bariatric surgery, and FDA-approved AOMs on additional associated health outcomes in adults and adolescents with obesity compared with no intervention or in conjunction with another treatment?
3. What are the harms of IBT, bariatric surgery, and FDA-approved AOMs for adults and adolescents with obesity compared with no intervention or in conjunction with another treatment?

Methodological Considerations

CHBRP's literature review of treatments for obesity focused on the IBT, bariatric surgery, and FDA-approved AOMs indicated for chronic weight management (both GLP-1s and non–GLP-1s). CHBRP's review of literature on behavioral health interventions for weight management was limited to IBT because SB 535 only requires coverage for IBT and does

33 Much of the discussion in this section is focused on reviews of available literature. However, as noted in the section on Implementing the Hierarchy of Evidence in the Medical Effectiveness Analysis and Research Approach document, in the absence of fully applicable to the analysis peer-reviewed literature on well-designed randomized controlled trials (RCTs), CHBRP's hierarchy of evidence allows for the inclusion of other evidence.
34 Studies of the effects of IBT, bariatric surgery, and FDA-approved AOMs indicated for chronic weight management in patients with obesity were identified through searches of Embase, PsycINFO, Ovid MEDLINE, Cochrane Library, PubMed, and Scopus. The search was limited to abstracts of studies published in English.
35 Grey literature consists of material that is not published commercially or indexed systematically in bibliographic databases. See CHBRP's website for more information.

not address coverage for less intensive behavioral interventions for weight management. CHBRP limited its review of literature on AOMs to medications that the FDA has approved for weight management because SB 535 would only require health plans and policies to cover medications that are specifically FDA-approved for chronic weight management.

Outcomes Assessed

Primary outcomes assessed included: change in body weight; percent weight loss; weight reduction of 5%,[36] 10%, 15%, or 20%; change in body mass index (BMI); and change in waist circumference. Health outcomes associated with obesity included: impact on quality of life and physical functioning; diabetes risk; changes in hemoglobin (A1c); and changes in systolic blood pressure (SBP) and diastolic blood pressure (DBP). CHBRP also reviewed literature on harms of FDA-approved AOMs and complications from bariatric surgery.

Study Findings

This following section summarizes CHBRP's findings regarding the strength of evidence for the effectiveness of IBT, bariatric surgery, and FDA-approved AOMs indicated for chronic weight management. Each section is accompanied by a corresponding figure. The title of the figure indicates the test, treatment, or service for which evidence is summarized. The statement in the box above the figure presents CHBRP's conclusion regarding the strength of evidence about the effect of a particular test, treatment, or service based on a specific relevant outcome and the number of studies on which CHBRP's conclusion is based. Definitions of CHBRP's grading scale terms are included in the box below.

The following terms are used to characterize the body of evidence regarding an outcome:

Very strong evidence indicates that there are multiple studies of a treatment and the large majority of studies are of high quality and consistently find that the treatment is either effective or not effective. Conclusions are unlikely to be altered by additional evidence.

Strong evidence indicates that the majority of the studies reviewed are consistent in their findings that treatment is either effective or not effective. Conclusions could be altered with additional strong evidence.

Some evidence indicates that a small number of studies have limited generalizability to the population of interest and/or the studies have a serious methodological concern in research design or implementation. Conclusions could be altered with additional evidence.

Conflicting evidence indicates that a similar number of studies of equal quality suggest the treatment is effective as suggest the treatment is not effective.

Not enough research indicates that there are no studies of the treatment or the available studies are not of high quality, meaning there is not enough evidence available to know whether or not a treatment is effective. It does not indicate that a treatment is not effective.

FDA-Approved AOMs

CHBRP identified multiple systematic reviews and meta-analyses that examined the effectiveness of FDA-approved AOMs. As stated in the *Background on Obesity* section, there are two main types of drugs approved by the FDA with an indication for chronic weight management – GLP-1 receptor agonists and non–GLP-1s. As of March 2025, there are seven drugs (both GLP-1s and non–GLP1s) that are FDA-approved for chronic weight management – see Table 7 on the next page.

[36] The U.S. Food and Drug Administration considers a weight loss of 5% as clinically important (LeBlanc et al., 2018).

Table 7. FDA-Approved AOMs Indicated for Chronic Weight Management, as of March 2025

GLP-1 Medications	Non–GLP-1 Medications
Liraglutide (Saxenda)	Bupropion/naltrexone (Contrave)
Semaglutide (Wegovy)	Orlistat (Xenical, Alli)
Tirzepatide (Zepbound)*	Phentermine/topiramate (Qsymia)
	Phentermine (Adipex-P, Lomaira)

Source: California Health Benefits Review Program, 2025; FDA, 2025a.
Note: * Tirzepatide (Zepbound) is a dual glucose-dependent insulinotropic polypeptide (GIP)/GLP-1.
Key: AOM = anti-obesity medication; GLP = glucagon-like peptide-1.

Effect of FDA-Approved AOMs on Weight Management Outcomes

Additional details about the evidence presented in this *Medical Effectiveness* section are available in Appendix B. In some cases, the FDA-approved AOMs were compared to placebo. In other cases, the FDA-approved AOMs were provided in conjunction with lifestyle intervention or another intervention and were compared with placebo plus lifestyle intervention or another intervention.

Effect of GLP-1 AOMs

Liraglutide 3.0 mg (Saxenda)

Effectiveness of liraglutide on weight management outcomes in adults: One randomized controlled trial (RCT) of adults with overweight or obesity and symptomatic knee osteoarthritis found that liraglutide led to significantly greater reductions in body weight and waist circumference compared to placebo, with significantly higher proportions of liraglutide participants achieving ≥5% weight loss (Gudbergsen et al., 2021).

Two studies of adults with overweight or obesity reported that liraglutide resulted in significantly greater percent body weight loss and higher proportions of participants achieving ≥5% and ≥10% weight loss compared to control treatments (Atlas et al., 2022; Shi et al., 2024).

Effectiveness of liraglutide on weight management outcomes in children and adolescents: A meta-analysis of two RCTs reported no statistically significant differences in body weight loss or BMI reduction between liraglutide and placebo among participants aged 5 to 18 years with obesity (Cornejo-Estrada et al., 2023).

Semaglutide 2.4 mg (Wegovy)

Effectiveness of semaglutide on weight management outcomes in adults: Two RCTs found significantly greater reductions in percent body weight with semaglutide compared to control treatments among adults with overweight or obesity (Shi et al., 2024) and adults with obesity-related heart failure and type 2 diabetes (Kosiborod et al, 2024).

Three RCTs reported significantly greater reductions in body weight and waist circumference with semaglutide compared to control treatments among adults with overweight or obesity and type 2 diabetes (Davies et al., 2021), pre-existing cardiovascular disease but no diabetes (Lincoff et al., 2023), or prediabetes (McGowan et al., 2024).

One systematic review and meta-analysis found significantly greater reductions in percent body weight, absolute body weight, BMI, and waist circumference with semaglutide compared to placebo in adults with overweight or obesity without diabetes (Qin et al., 2024).

Significantly higher proportions of semaglutide participants achieved ≥5% and ≥10% weight loss (Davies et al., 2021; McGowan et al., 2024; Qin et al., 2024; Shi et al., 2024), ≥15% weight loss (Davies et al., 2021; McGowan et al., 2024; Qin et al., 2024), and ≥20% weight loss (McGowan et al., 2024; Qin et al., 2024) compared to control group participants.

Effectiveness of semaglutide on weight management outcomes in children and adolescents: One RCT reported significantly greater BMI reduction and a significantly higher likelihood of achieving ≥5% weight loss with semaglutide compared to placebo among adolescents aged 12 to 18 years with obesity or with overweight and at least one weight-related coexisting condition (Weghuber et al., 2022).

A post hoc analysis of the aforementioned Weghuber et al. (2022) trial found that semaglutide participants were significantly more likely to be reclassified to a normal-weight or overweight BMI category and had significantly higher odds of achieving an improvement of at least one BMI category (Kelly et al., 2023).

Tirzepatide (Zepbound)

Effectiveness of tirzepatide on weight management outcomes in adults: One RCT and one systematic review/meta-analysis reported that tirzepatide (5 mg, 10 mg, and 15 mg) led to significantly greater reductions in percent body weight (Jastreboff et al., 2022; Liu et al., 2024) as well as BMI and waist circumference (Liu et al., 2024) than control treatments.

Significantly greater proportions of participants achieved ≥5% weight loss for all tirzepatide dosages, and significantly more participants in the 10 mg and 15 mg groups achieved ≥20% weight loss (Jastreboff et al., 2022). Significantly higher proportions of tirzepatide participants achieved ≥5%, ≥10%, ≥15%, ≥20%, and ≥25% weight loss versus placebo (Liu et al., 2024).

Effectiveness of tirzepatide on weight management outcomes in children and adolescents: Tirzepatide is not approved for use in children and adolescents.

Effect of non–GLP-1 AOMs

Bupropion/naltrexone (Contrave)

Effectiveness of bupropion/naltrexone on weight management outcomes in adults: Two studies reported that bupropion/naltrexone resulted in greater percent body weight loss and higher proportions of participants achieving ≥5% and ≥10% weight loss compared to control treatments (Atlas et al., 2022; Shi et al., 2024).

Effectiveness of bupropion/naltrexone on weight management outcomes in children and adolescents: Bupropion/naltrexone is not approved for use in children and adolescents.

Orlistat (Xenical, Alli)

Effectiveness of orlistat on weight management outcomes in adults: Two systematic reviews reported significantly greater weight loss with orlistat compared to control treatments (LeBlanc et al., 2018; Shi et al., 2024). After 4 years, the orlistat 120-mg group maintained significantly more weight loss than the control group (LeBlanc et al., 2018). More participants achieved ≥5% and ≥10% weight loss with orlistat (Shi et al., 2024).

Effectiveness of orlistat on weight management outcomes in children and adolescents: One systematic review found that orlistat treatment for 6 to 12 months resulted in greater BMI reduction than the control treatment in children and adolescents aged 2 to 18 years with overweight or obesity; however, between-group differences were only statistically significant for two-thirds of the studies (O'Connor et al., 2017).

One meta-analysis involving children and adolescents under 18 years of age with overweight or obesity reported that orlistat was associated with a significant reduction in BMI in the short term compared to placebo, but between-group differences were not statistically significant after 5 months (Zhang et al., 2024).

Phentermine/topiramate (Qsymia)

Effectiveness of phentermine/topiramate on weight management outcomes in adults: Three studies reported greater reductions in body weight (Allison et al., 2012; Gadde et al., 2011[37]; Shi et al., 2024) and waist circumference (Allison et al., 2012; Gadde et al., 2011) with phentermine/topiramate compared to control treatments, along with significantly higher proportions of phentermine/topiramate participants achieving ≥5% and ≥10% body weight loss.

Effectiveness of phentermine/topiramate on weight management outcomes in children and adolescents: Two RCTs reported significantly greater reductions in body weight and waist circumference (Hsia et al., 2020; Kelly et al., 2022) as well as BMI (Kelly et al., 2022) with phentermine/topiramate compared to control treatments among children and adolescents aged 12 to 17 years with obesity.

Phentermine (Adipex-P, Lomaira)

Effectiveness of phentermine on weight management outcomes in adults: One meta-analysis found that phentermine resulted in significantly greater percent weight loss and significantly higher proportions of participants who achieved ≥5% and ≥10% weight loss compared to control treatment among adults with overweight or obesity and an inadequate response to lifestyle interventions (Grunvald et al., 2022).

Effectiveness of phentermine on weight management outcomes in children and adolescents: There are no studies of phentermine monotherapy in children and adolescents.

Drug-to-Drug Comparison of FDA-Approved AOMs

In a network meta-analysis of five RCTs[38] (N = 11,414) involving adults with overweight or obesity without diabetes, Alkhezi et al. (2023) found that tirzepatide 10 mg and 15 mg, semaglutide 2.4 mg, and liraglutide 3.0 mg were associated with significantly more weight loss and significantly greater proportions of participants with ≥5%, ≥10%, ≥15%, and ≥20% weight loss than placebo (except liraglutide for the ≥15% and ≥20% comparisons). Tirzepatide 15 mg resulted in significantly greater percentage weight loss than semaglutide and liraglutide, whereas semaglutide yielded significantly greater weight loss than liraglutide. Tirzepatide 10 mg and 15 mg and semaglutide had significantly higher odds of achieving ≥5% to 20% weight loss than liraglutide. See Figure 2 on the next page.

[37] The Allison et al. (2012) and Gadde et al. (2011) studies were included in the Atlas et al. (2022) ICER report. Findings are presented in the ICER report and in this CHBRP report separately because of the different patient populations involved.
[38] One RCT employed lifestyle counseling in addition to both the GLP-1 and placebo treatments, three RCTs employed lifestyle modification, and one RCT employed IBT plus a low-calorie diet.

Figure 2. Mean Percentage Weight Loss Among Adults With Overweight or Obesity, Without Diabetes

	Tirzepatide 15 mg				
	−1.4 (−5.5 to 2.6)	Tirzepatide 10 mg			
	−5.1 (−9.8 to −0.7)	−3.7 (−8.4 to 0.8)	Semaglutide 2.4 mg		
	−13.0 (−17.4 to −8.6)	**−11.6 (−16.1 to −7.2)**	**−7.9 (−10.5 to −5.0)**	Liraglutide 3.0 mg	
	−17.8 (−21.8 to −13.8)	**−16.4 (−20.4 to −12.4)**	**−12.7 (−14.8 to −10.3)**	**−4.8 (−6.7 to −2.8)**	Placebo
Relative Effectiveness	**Greater**	←		→	**Lesser**

Source: California Health Benefits Review Program, 2025; Alkhezi et al., 2023.

Key: Bold values indicate comparisons with significant differences.

Figure 3. Mean Percentage Weight Loss Among Adults With Overweight or Obesity, Without Diabetes

	Semaglutide 2.4 mg				
	−4.6 (−2.4 to −7.2)	Phentermine 15 mg/topiramate 92 mg			
	−8.7 (−7.3 to −10.4)	**−4.1 (−1.9 to −6.3)**	Liraglutide 3.0 mg		
	−9.1 (−7.2 to −11.5)	**−4.5 (−2.2 to −6.9)**	−0.4 (−2.3 to +1.3)	Bupropion/naltrexone	
	−13.7 (−12.6 to −15.1)	**−9.1 (−7.1 to −11)**	**−5.0 (−3.9 to −6.1)**	**−4.6 (−3.0 to −6.0)**	Placebo
Relative Effectiveness	**Greater**	←		→	**Lesser**

Source: California Health Benefits Review Program, 2025; Atlas et al., 2022.

Note: Bold values indicate comparisons with significant differences.

Atlas et al. (2022) conducted network meta-analyses that compared liraglutide, semaglutide, bupropion/naltrexone, and phentermine/topiramate[39] among adult participants with overweight or obesity with and without diabetes. Among participants *without diabetes*, semaglutide was superior to the other drugs reviewed and had the greatest odds of achieving ≥5% and ≥10% weight loss at 1 year. Phentermine 15 mg/topiramate 92 mg demonstrated significantly greater

[39] Liraglutide 3.0 mg and semaglutide 2.4 mg are GLP-1s. Bupropion/naltrexone and phentermine/topiramate are non-GLP-1s.

weight loss than liraglutide and bupropion/naltrexone. Liraglutide was not statistically more effective than bupropion/naltrexone. Among participants *with diabetes mellitus*, all AOMs showed significantly greater weight loss than placebo; however, the magnitude of weight loss was lower than in the trials of participants without diabetes. Semaglutide demonstrated a greater percentage weight loss than the other medications, but these differences were not statistically significant. Phentermine 15 mg/topiramate 92 mg demonstrated greater weight loss than liraglutide and bupropion/naltrexone, but results were only statistically significant compared to bupropion/naltrexone. Liraglutide was not statistically more effective than bupropion/naltrexone. See Figure 3 on the next page.

Impact of FDA-Approved AOMs on Other Health Outcomes

Quality of life and physical functioning outcomes for GLP-1s

Liraglutide 3.0 mg (Saxenda)

Liraglutide was associated with greater improvements in health status (Atlas et al., 2022), functional outcomes (Jobanputra et al., 2023), and health-related quality of life (Shi et al., 2024) compared to control treatments among adults with overweight or obesity. One study found no significant difference in knee pain relief (Gudbergsen et al., 2021), and one study found no significant difference in depression symptom scores (Shi et al., 2024) between liraglutide and control treatments.

Semaglutide 2.4 mg (Wegovy)

Among adults with overweight or obesity, semaglutide was associated with greater improvements in functional outcomes (Davies et al., 2021; Jobanputra et al., 2023; Kosiborod et al., 2024), health status (Lincoff et al., 2023), and health-related quality of life (Qin et al., 2024; Shi et al., 2024) compared to control treatments.

Among adolescents with overweight or obesity, semaglutide was associated with significant improvements in weight-related quality of life overall and in the physical comfort domain of the Impact of Weight on Quality of Life (IWQOL) – Kids questionnaire. There were no significant differences between semaglutide and the control treatment in regard to the body esteem, social life, or family relations domains of the questionnaire (Weghuber et al., 2022).

Tirzepatide (Zepbound)

Tirzepatide was associated with significantly greater improvements in physical functioning (Jastreboff et al., 2022; Liu et al., 2024) and quality of life (Liu et al., 2024) compared to control treatments among adults with overweight or obesity.

Quality of life and physical functioning outcomes for non–GLP-1s

Bupropion/naltrexone (Contrave)

Differences in functional outcomes (Jobanputra et al., 2023) and quality of life significantly favored bupropion/naltrexone compared to control treatments (Shi et al., 2024), but there was no significant difference between groups in depression symptom scores (Shi et al., 2024) among adults with overweight or obesity.

Orlistat (Xenical, Alli)

There were no statistically significant differences in quality-of-life scores or depression symptom scores among adults with overweight or obesity who received orlistat versus the control treatment (Shi et al., 2024).

There was no statistically significant difference in quality of life among children and adolescents with overweight or obesity who received orlistat versus the control treatment (O'Connor et al., 2017).

Phentermine/topiramate (Qsymia)

Among adult with overweight or obesity, those who received phentermine/topiramate had significantly higher quality-of-life scores compared to the control group, but there was no significant difference in depression symptom scores between the two groups (Shi et al., 2024).

There were no statistically significant differences in depression severity (Hsia et al., 2020) or quality-of-life (Kelly et al., 2022) scores between phentermine/topiramate and control treatments among adolescents with obesity.

Type 2 diabetes risk assessment outcomes for GLP-1s

Assessing fasting plasma glucose (FPG) levels (which provide a snapshot of blood sugar at a specific point in time), blood glucose levels, fasting serum insulin levels (which measures insulin levels in the bloodstream), and dyslipidemia (an abnormal distribution of lipids within the bloodstream), aid in the diagnosis of diabetes (Nichols et al., 2008; Schofield et al., 2016).

Liraglutide 3.0 mg (Saxenda)

Among adults with overweight or obesity, six trials indicated greater improvements in blood glucose with liraglutide compared to control treatments. Only three of five trials identified benefits to low-density lipoprotein cholesterol with liraglutide (Atlas et al., 2022).

Liraglutide did not increase hypoglycemic episodes compared to placebo among participants aged 5 to 18 years with obesity (Cornejo-Estrada et al., 2023).

Semaglutide 2.4 mg (Wegovy)

Among adults with overweight or obesity, semaglutide was associated with greater improvements in FPG levels, fasting serum insulin levels, and lipid profile measures[40] compared to control treatments (Davies et al., 2021; Lincoff et al., 2023; McGowan et al., 2024; Qin et al., 2024; Wadden et al., 2021) and greater improvements in cardiometabolic factors (Wilkinson et al., 2023). A significantly greater proportion of participants with obesity and prediabetes returned to normoglycemia at week 52 with semaglutide control to the control treatment (McGowan et al., 2024).

Tirzepatide (Zepbound)

Tirzepatide for adults with overweight or obesity was associated with significant improvements in fasting insulin and lipid levels, and higher likelihood of returning to normoglycemia (Jastreboff et al., 2022).

Type 2 diabetes risk assessment outcomes for non–GLP-1s

Bupropion/naltrexone (Contrave)

Among adults with overweight or obesity, four trials indicated greater improvements in blood glucose with bupropion/naltrexone compared to control treatments. Only three of the four trials identified benefits to low-density lipoprotein cholesterol with bupropion/naltrexone (Atlas et al., 2022).

Orlistat (Xenical, Alli)

Among children and adolescents with overweight or obesity, O'Connor et al. (2017) found no significant changes in glucose, insulin, or lipid levels with orlistat compared to the control treatment, whereas Zhang et al. (2024) reported that orlistat significantly improved total cholesterol, triglycerides, low-density lipoprotein cholesterol, and high-density lipoprotein cholesterol compared to placebo.

[40] Lipid profile comprises total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, very low-density lipoprotein cholesterol, free fatty acids, and triglycerides.

Phentermine/topiramate (Qsymia)

Blood glucose and low-density lipoprotein cholesterol levels decreased with phentermine/topiramate compared to control treatments among adults with overweight or obesity (Atlas et al., 2022).

Among children and adolescents with obesity, Hsia et al. (2020) found no statistically significant difference in fasting glucose, fasting insulin, total cholesterol, or triglycerides between phentermine/topiramate and the control treatment .Kelly et al. (2022) reported no statistically significant differences in fasting insulin, total cholesterol, or low-density lipoprotein cholesterol between phentermine/topiramate and the control treatment; however, differences in high-density lipoprotein cholesterol and triglycerides favored phentermine/topiramate.

Hemoglobin A1c outcomes for GLP-1s

The hemoglobin A1c (also known as glycated hemoglobin, glycosylated hemoglobin, HbA1c, or A1c) test measures a person's average level of blood sugar (glucose) over the past 90 days. Higher HbA1c levels suggest poor blood sugar control and increased risk of diabetes-related complications, which contributes to obesity (Eyth and Naik, 2023).

Liraglutide 3.0 mg (Saxenda)

Liraglutide was associated with greater improvements in HbA1c compared to control treatments among adults with overweight or obesity (Alkhezi et al., 2023; Atlas et al., 2022).

Semaglutide 2.4 mg (Wegovy)

Among adults with overweight or obesity, semaglutide was associated with significantly greater reductions in HbA1c (Alkhezi et al., 2023; Davies et al., 2021; McGowan et al., 2024; Qin et al., 2024) and significantly greater improvements in glycated hemoglobin (Lincoff et al., 2023; Wadden et al., 2021) compared to control treatments.

Tirzepatide (Zepbound)

Tirzepatide was associated with significant reductions in HbA1c compared to control treatments among adults with overweight or obesity (Alkhezi et al., 2023; Liu et al., 2024).

Hemoglobin A1c outcomes for non–GLP-1s

Bupropion/naltrexone (Contrave)

Only one of four bupropion/naltrexone studies in the Atlas et al. (2022) review examined change in HbA1c and found that bupropion/naltrexone was associated with greater improvements in A1c compared to the control treatment among adults with overweight or obesity (Atlas et al., 2022).

Blood pressure outcomes for GLP-1s

Systolic blood pressure (SBP) measures the pressure in the circulatory system when the heart beats and pumps blood. Diastolic blood pressure (DBP) measures the pressure in the circulatory system when the heart is resting between beats. Obesity is a significant risk factor for hypertension (high blood pressure). Obesity-related hypertension is often a precursor for coronary artery disease, heart failure, and chronic kidney disease (Jung and Ihm, 2023).

Liraglutide 3.0 mg (Saxenda)

Liraglutide was associated with greater improvements in SBP compared to control treatments among adults with overweight or obesity (Atlas et al., 2022).

Semaglutide 2.4 mg (Wegovy)

Semaglutide resulted in significant improvements in SBP (Davies et al., 2021; Lincoff et al., 2023; McGowan et al., 2024; Qin et al., 2024; Wadden et al., 2021) and DBP (Lincoff et al., 2023; Qin et al., 2024; Wadden et al., 2021) compared to control treatments among adults with overweight or obesity.

Tirzepatide (Zepbound)

Tirzepatide was linked to significant improvements in SBP and DBP compared to control treatments among adults with overweight or obesity (Jastreboff et al., 2022; Liu et al., 2024).

Blood pressure outcomes for non–GLP-1s

Bupropion/naltrexone (Contrave)

Bupropion/naltrexone was associated with worse SBP outcomes compared to control treatments among adults with overweight or obesity (Atlas et al., 2022).

Orlistat (Xenical, Alli)

Orlistat resulted in significantly greater reductions in DBP (but not SBP) than the control treatment in children and adolescents with overweight or obesity (O'Connor et al., 2017).

Phentermine/topiramate (Qsymia)

Among adults with overweight or obesity, phentermine/topiramate yielded greater improvements in SBP compared to control treatments (Atlas et al., 2022).

Among children and adolescents with obesity, there was no significant difference in SBP with phentermine/topiramate versus control treatments and change in DBP was only statistically significant at the phentermine 7.5 mg/topiramate 46 mg dose but not at the phentermine 15 mg/topiramate 92 mg dose (Hsia et al., 2020; Kelly et al., 2022).

C-reactive protein level outcomes for GLP-1s

C-reactive protein (CRP) levels are a marker of inflammation in the body. Higher BMI is associated with higher CRP concentrations, suggesting low-grade systemic inflammation in people with overweight or obesity. Elevated CRP levels in people with overweight or obesity are associated with increased risk for health issues such as cardiovascular disease, type 2 diabetes, and other inflammatory conditions (Visser et al., 1999).

Liraglutide 3.0 mg (Saxenda)

CRP levels significantly decreased with the combination of liraglutide and exercise, but not with placebo, exercise alone, or liraglutide alone (Sandsdal et al., 2023),

Semaglutide 2.4 mg (Wegovy)

Semaglutide was associated with significant improvements in CRP levels compared to control treatments (Davies et al., 2021; Lincoff et al., 2023; Qin et al., 2024; Wadden et al., 2021).

Harms

Harms of FDA-approved GLP-1 AOMs

Liraglutide 3.0 mg (Saxenda)

Harms of liraglutide in adults: Gastrointestinal adverse events (AEs) such as nausea, vomiting, indigestion, loss of appetite, constipation, and diarrhea were more commonly experienced by liraglutide groups than control groups (Alkhezi et al., 2023; Atlas et al., 2022; Gudbergsen et al., 2021; Shi et al., 2024). The odds of study withdrawal due to AEs were

higher with liraglutide (Alkhezi et al., 2023; Shi et al., 2024). Liraglutide was also associated with higher rates of gallbladder-related and pancreatic AEs (Atlas et al., 2022).

A meta-analysis of 26 trials reported that GLP-1 treatments were associated with a significant increase in the risk of overall thyroid cancer compared to placebo; however, when isolating the meta-analysis to only include the six studies that involved liraglutide or semaglutide for the treatment of obesity in adults, the increased risk for overall thyroid cancer was not statistically significant (Silverii et al., 2024).

Harms of liraglutide in children and adolescents: Liraglutide did not increase total AEs compared to placebo among participants aged 5 to 18 years with obesity (Cornejo-Estrada et al, 2023).

Semaglutide 2.4 mg (Wegovy)

Harms of semaglutide in adults: The proportions of AEs (Qin et al., 2024; Wadden et al., 2021) and serious AEs (McGowan et al., 2024; Qin et al., 2024) were similar in both the semaglutide and control groups. Another study reported that serious AEs were more likely to be reported by the control group than the semaglutide group (Lincoff et al., 2023).

Semaglutide was more likely to cause gastrointestinal AEs such as nausea, vomiting, diarrhea, constipation, headache, loss of appetite, indigestion, and abdominal pain compared to control treatments (Alkhezi et al., 2023; McGowan et al., 2024; Qin et al., 2024; Shi et al., 2024; Wadden et al., 2021). Semaglutide had higher rates of AEs leading to discontinuation (Lincoff et al., 2023; Qin et al., 2024; McGowan et al., 2024; Shi et al., 2024).

Rates of cardiovascular disorders were significantly lower with semaglutide compared to control treatments (Qin et al., 2024). Semaglutide was the only GLP-1 associated with higher odds of causing headache and abdominal pain (Alkhezi et al., 2023).

A meta-analysis of 26 trials reported that GLP-1 treatments were associated with a significant increase in the risk of overall thyroid cancer compared to placebo; however, when isolating the meta-analysis to only include the six studies that involved liraglutide or semaglutide for the treatment of obesity in adults, the increased risk for overall thyroid cancer was not statistically significant (Silverii et al., 2024).

Harms of semaglutide in children and adolescents: The control group was more likely to report AEs than the semaglutide group; however, gastrointestinal AEs (primarily nausea, vomiting, and diarrhea) and serious AEs were more frequently reported by the semaglutide group (Weghuber et al., 2022).

Tirzepatide (Zepbound)

Harms of tirzepatide in adults: Tirzepatide participants were more like to report AEs (but not serious AEs) than control treatment participants – the most commonly reported AEs were gastrointestinal, and withdrawal rates due to AEs were higher with tirzepatide (Jastreboff et al., 2022; Liu et al., 2024). Tirzepatide was more likely to cause nausea, vomiting, and loss of appetite than placebo – tirzepatide 10 mg was significantly more likely to cause constipation and tirzepatide 15 mg was more likely to cause diarrhea and indigestion (Alkhezi et al., 2023).

Harms of tirzepatide in children and adolescents: Tirzepatide is not approved for use in children and adolescents.

Harms of FDA-approved non–GLP-1 AOMs

Bupropion/naltrexone (Contrave)

Harms of bupropion/naltrexone in adults: Among adults with overweight or obesity, the odds of discontinuation due to any AEs and the incidence rate of gastrointestinal AEs (e.g., nausea) were higher with bupropion/naltrexone compared the control treatment (Shi et al., 2024).

Harms of bupropion/naltrexone in children and adolescents: Bupropion/naltrexone is not approved for use in children and adolescents.

Orlistat (Xenical, Alli)

Harms of orlistat in adults: The odds of discontinuation due to any AEs and the incidence rate of gastrointestinal AEs were higher with orlistat than the control treatment (Shi et al., 2024).

Harms of orlistat in children and adolescents: Gastrointestinal AEs (e.g., abdominal pain, cramps, flatulence) were more frequently reported by the orlistat group than the control group, with discontinuations due to AEs being rare but approximately twice as common in those receiving orlistat (O'Connor et al., 2017).

Phentermine/topiramate (Qsymia)

Harms of phentermine/topiramate in adults: Phentermine/topiramate was associated with a higher likelihood of experiencing gastrointestinal (Shi et al., 2024) and other AEs such as paresthesia and dry mouth (Atlas et al., 2022) compared to control treatments. The odds of discontinuation due to any AEs were higher with phentermine/topiramate (Shi et al., 2024).

Harms of phentermine/topiramate in children and adolescents: Those who received the high dose of phentermine/topiramate (15 mg/92 mg) reported the most AEs, followed by the placebo group and the low dose (7.5 mg/45 mg) group – the most frequently reported AEs were nervous system disorders (e.g., headache, paresthesia) and gastrointestinal disorders (e.g., abdominal pain, nausea) (Hsia et al., 2020; Kelly et al., 2022). Infections (e.g., COVID-19, upper respiratory tract infection) were also among the most frequently reported AEs (Kelly et al., 2022).

Phentermine (Adipex-P, Lomaira)

Harms of phentermine in adults: More participants in the phentermine group discontinued treatment due to AEs (but not serious AEs) compared to the control group; the most common reasons for discontinuation included insomnia, irritability, anxiety, headache, nausea, and increased blood pressure and heart rate (Grunvald et al., 2022).

Summary of findings regarding FDA-approved AOMs for adults: There is *very strong evidence* that both FDA-approved GLP-1 receptor agonists (liraglutide, semaglutide, tirzepatide) and non–GLP-1 medications (bupropion/naltrexone, orlistat, phentermine/topiramate, and phentermine) for chronic weight management are effective when used as adjuncts to usual care (which includes standard diet and activity and lifestyle recommendations) for adults. Use of these medications increases the amount of weight loss and percentage of body weight loss, and reduces BMI, compared to placebo or usual care alone.

GLP-1s also improved diabetic and cardiometabolic factors, blood pressure, and physical function compared to usual care.

Comparisons across the medications as well as direct evidence suggest the following (as illustrated in Figure 5): GLP-1s are more effective for weight management than non-GLP-1s tirzepatide is more effective than semaglutide which is more effective than liraglutide; and phentermine/topiramate is more effective than bupropion/naltrexone.

Figure 4. Evidence of Effectiveness of FDA-Approved AOMs for Adults

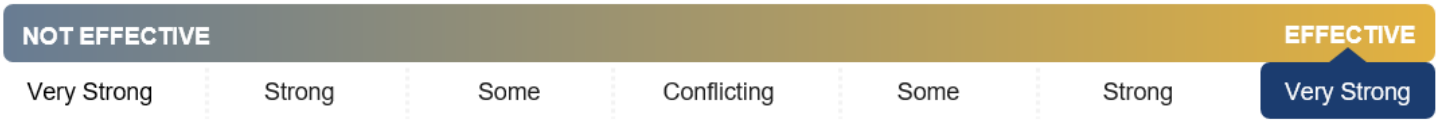
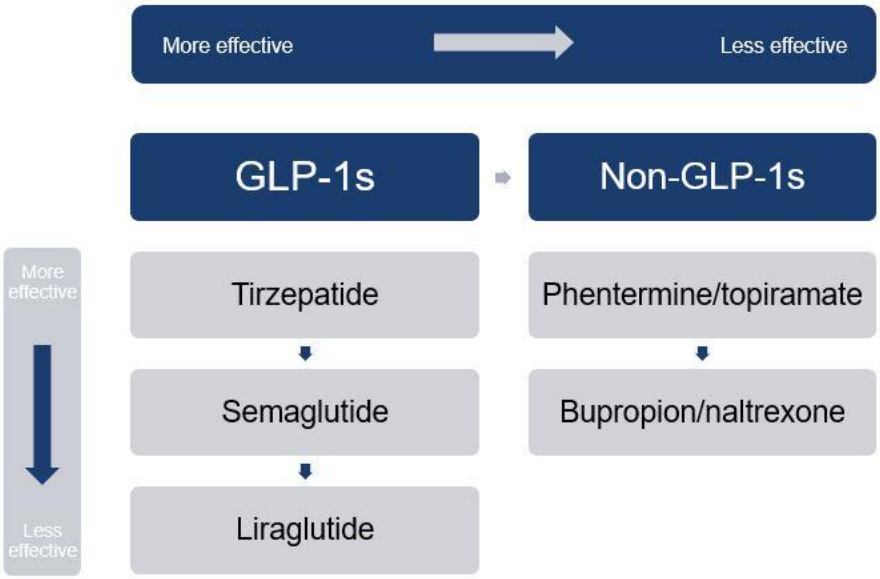


Figure 5. Comparison of FDA-Approved AOMs



Source: California Health Benefits Review Program, 2025.
Key: The arrows indicate directionality of effectiveness between the AOMs.

Summary of findings regarding FDA-approved AOMs for children and adolescents: There is *conflicting evidence* that AOMs improve weight loss in children and adolescents. For liraglutide, one meta-analysis reported that there was no statistically significant difference in weight loss or reduction in BMI, compared to placebo. Two studies reported that adolescents who received semaglutide had a greater improvement in BMI than adolescents who received a placebo. Two studies reported mixed results on the effects of orlistat on BMI. One RCT reported significant reductions in body weight and waist circumference with phentermine/topiramate compared to placebo, and another RCT reported greater reductions in body weight, BMI, and waist circumference with phentermine/topiramate.

Tirzepatide and bupropion/naltrexone are not approved for use in children and adolescents.

Figure 6. Evidence of Effectiveness of FDA-Approved AOMs for Children and Adolescents

Bariatric Surgery

Effectiveness of bariatric surgery compared to nonsurgical interventions on weight management outcomes among adults

Three systematic reviews and meta-analyses compared the effectiveness of bariatric surgery and nonsurgical interventions, which included no treatment, usual care, increased physical activity, very-low-calorie diet, and medication, concluding that bariatric surgery resulted in greater improvement in weight management outcomes (i.e., greater loss of body weight, lower mean BMI, smaller waist circumference) compared with nonsurgical interventions (Colquitt et al., 2014; Park et al., 2019; Wang et al., 2021).

Effectiveness of bariatric surgery compared to nonsurgical interventions on other health outcomes among adults

Outcomes related to cardiovascular factors

Wang et al. (2021) reported that among people who received bariatric surgery, SBP and DBP decreased significantly, and triglycerides and high-density lipoprotein cholesterol improved significantly compared to people who received standard care (e.g., low-carbon diet, lifestyle modification, pharmacotherapy, and regular consultation meetings). There were no statistically significant differences between the two groups with regard to total cholesterol and low-density lipoprotein cholesterol.

Outcomes related to diabetic factors

In a systematic review and meta-analysis, Park et al. (2019) reported that diabetes remission rates were significantly higher for people who received all types of bariatric surgery compared to people who received standard care (e.g., lifestyle modification and pharmacotherapy) at 1 to 2 years and at 3 to 5 years after surgery. In a meta-analysis, Wu et al. (2023) reported that people who received bariatric surgery were significantly more likely to achieve lower HbA1c within 1 year compared to people who received a placebo (defined as any therapies other than bariatric surgery, novel glucose-lowering agents, and insulin). Wang et al. (2021) reported that compared to people who received standard care, people who received bariatric surgery were significantly less likely to have metabolic syndrome and less likely to use insulin, diabetes medications other than metformin, or lipid-lowering drugs at follow-up.

Effectiveness of bariatric surgery on weight management among children and adolescents

Torbahn et al.'s systematic review (2022) identified one RCT that compared laparoscopic adjustable gastric banding (LAGB) to a control group that received a behavioral intervention. At 2 years, the authors reported a significant decrease in weight and BMI for LAGB compared to controls.

Järvholm et al. (2023) reported findings from an RCT that concluded that adolescents who received bariatric surgery experienced a significantly greater reduction in BMI at 2 years' follow-up compared to the adolescents who received intensive nonsurgical treatment that included a low-calorie diet, lifestyle modification, and increased physical activity.

Harms of bariatric surgery in adults

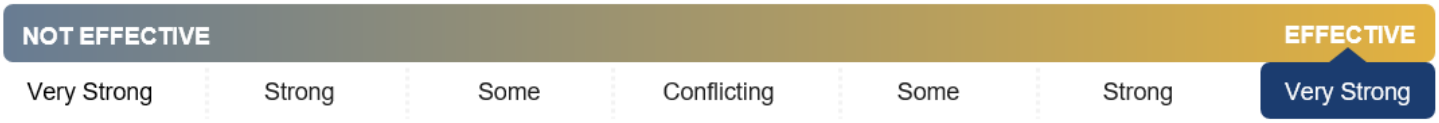
Colquitt et al. (2014) found that no deaths occurred among studies that reported on mortality, whereas Wang et al. (2021) reported that four deaths occurred – three in control groups due to heart disease and one who received bariatric surgery, whose cause of death was not identified. Colquitt et al. (2014) found rates of serious AEs were higher in the surgery groups versus in the no surgery groups. Serious AEs among persons who received bariatric surgery included site infection, cholecystitis with pancreatitis, pouch dilation (requiring repositioning), pneumonia, severe headaches and strangulated umbilical hernia, and bowel obstruction. Wang et al. (2021) reported that during the follow-up period in the studies, more AEs were reported in the surgery group than in the control group. Park et al. (2019) found that hernias were the most common AE, followed by obstruction/stricture, gastrointestinal bleeding, and ulcers.

Harms of bariatric surgery in children and adolescents

Järvholm et al. (2023) reported that AEs after bariatric surgery were mild but included one cholecystectomy (gallbladder removal). This study reported that surgical patients had a reduction in bone mineral density, whereas controls were unchanged after 2 years. There were no significant differences between the groups in vitamin and mineral levels, gastrointestinal symptoms (except less reflux in the surgical group), or in mental health at the 2-year follow-up.

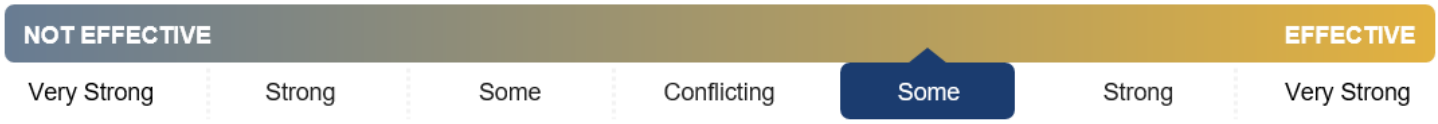
Summary of findings regarding bariatric surgery for adults on weight management outcomes: There is *very strong evidence* that bariatric surgery for weight management is effective, with studies reporting that patients lose significantly more weight after surgery compared to patients who receive nonsurgical interventions. Additionally, there is evidence that bariatric surgery improves diabetes and cardiovascular outcomes.

Figure 7. Evidence of Effectiveness of Bariatric Surgery for Adults on Weight Management Outcomes



Summary of findings regarding bariatric surgery for children and adolescents on weight management outcomes: There is *some evidence* from two RCTs that bariatric surgery for weight management is effective, with studies reporting that patients lose significantly more weight and have significantly lower BMIs after surgery compared to patients who receive nonsurgical interventions.

Figure 8. Evidence of Effectiveness of Bariatric Surgery for Children and Adolescents on Weight Management Outcomes



Intensive Behavioral Therapy

Effectiveness of IBT on weight management outcomes in adults

A systematic review commissioned by the U.S. Preventive Services Task Force (USPSTF) (LeBlanc et al., 2018) assessed the benefits and harms of IBT for weight loss in adults with above normal BMI. Pooled results from 67 RCTs of IBT for weight management in adults indicated that receiving IBT for weight loss was associated with a statistically significant greater weight loss compared to the control groups at 12 to 18 months. The systematic review also found that persons who received IBT were significantly more likely to lose 5% of their baseline weight compared to the control groups and that weight loss continued to be significantly greater among those who received IBT in interventions that lasted up to 36 months. Participants in the intervention groups also regained less weight than those in the control groups.

Effectiveness of IBT on weight management outcomes in children and adolescents

The American Academy of Pediatrics' clinical practice guideline regarding IBT for weight loss among children and adolescents with obesity references a systematic review of 42 trials conducted by O'Connor et al. (2017). The authors found a dose-response pattern where increased contact hours were associated with larger effects. After 6 to 12 months, differences in BMI change were typically statistically significant for interventions that involved 26 or more contact hours and typically not statistically significant for interventions with fewer contact hours. Participants in the intervention groups experienced reductions in BMI, whereas participants in the control groups experienced no changes in BMI or increases in BMI. The authors also assessed the impact of IBT on change in weight and found that participants who received IBT that involved 26 or more contact hours lost more weight than participants in control groups.

Outcomes related to diabetic factors in adults and children/adolescents

In a pooled analysis of nine trials, LeBlanc et al. (2018) determined that there was a significant reduction in the risk of developing type 2 diabetes over 1 to 9 years among adults who received IBT for weight loss compared with participants in comparison groups.

Among the studies of interventions that involved 52 or more contact hours, O'Connor et al. (2017) identified some improvements insulin and glucose measures but no changes in fasting plasma glucose or lipids for children and adolescents.

Outcomes related to cardiovascular factors in children/adolescents

In a pooled analysis of six studies, O'Connor et al. (2017) found that participants who received 52 or more contact hours of IBT had significantly greater improvements in SBP and DBP than participants in control groups.

Harms

LeBlanc et al. (2018) concluded that there were no serious harms associated with IBT for weight loss in adults. O'Connor et al. (2017) found no evidence of IBT for weight loss causing harm in children and adolescents.

FDA-Approved AOMs Versus IBT

Liraglutide 3.0 mg (Saxenda)

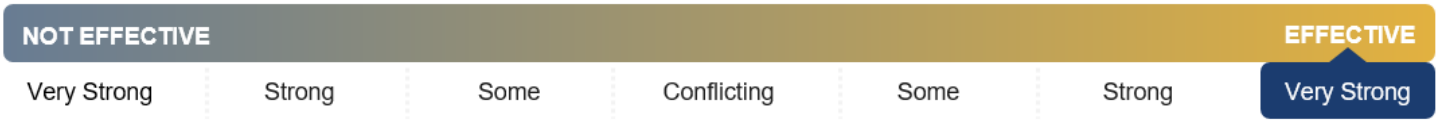
One RCT reported that liraglutide plus IBT in adults with overweight or obesity and without diabetes significantly increased percent weight loss relative to IBT alone at week 52 (Tronieri et al., 2020).

Semaglutide 2.4 mg (Wegovy)

One RCT found that semaglutide plus IBT in adults with overweight or obesity with at least one weight-related comorbid condition (not diabetes) resulted in significantly greater improvements in body weight, waist circumference, and BMI, and significantly more participants achieving ≥5%, ≥10%, ≥15%, and ≥20% weight loss after 68 weeks compared to placebo plus IBT (Wadden et al., 2021).

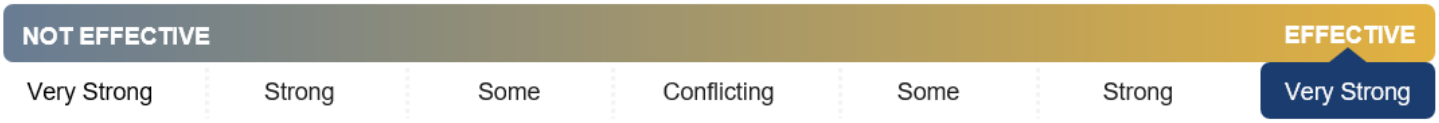
Summary of findings regarding intensive behavioral therapy for adults: There is *very strong* evidence that IBT for weight loss is effective in reducing weight and BMI in adults based on one systematic review. Participants who received IBT were significantly more likely to lose weight and achieve a ≥5% weight loss, as well as have a reduced risk of developing type 2 diabetes, than participants who received a controlled intervention.

Figure 9. Evidence of Effectiveness of Intensive Behavioral Therapy for Adults



Summary of findings regarding intensive behavioral therapy for children and adolescents: There is *very strong evidence* that IBT for weight loss is effective in reducing weight and BMI in adults based on one systematic review. Participants who received IBT were significantly more likely to lose weight and achieve a ≥5% weight loss, as well as have a reduced risk of developing type 2 diabetes, than participants who received a controlled intervention.

Figure 10. Evidence of Effectiveness of Intensive Behavioral Therapy for Children and Adolescents



Summary of Findings

The evidence for the medical effectiveness of IBT, bariatric surgery, and FDA-approved AOMs indicated for chronic weight management in patients with obesity is summarized below in Table 8.

Table 8. Summary of Evidence of Medical Effectiveness of Treatments for Chronic Weight Management

Type of Weight Management Intervention	Impact of Intervention on Weight Management	Impact of Intervention on Other Health Outcomes	Comparison of Interventions
FDA-approved GLP-1 AOMs for adults	*Very strong evidence* that use of FDA-approved GLP-1 AOMs combined with usual care (including diet and activity and lifestyle recommendations) results in greater weight loss than usual care alone.	*Very strong evidence* of improvement in HRQOL, physical functioning, cardiometabolic health, blood pressure, and HbA1c with GLP-1s.	Comparisons across GLP-1s suggest that tirzepatide achieves greater weight loss than semaglutide which achieves greater weight loss than liraglutide.
FDA-approved non–GLP-1 AOMs for adults	*Very strong evidence* that use of FDA-approved non–GLP-1 AOMs combined with usual care (including diet and activity and lifestyle recommendations) results in greater weight loss than usual care alone.	• *Some evidence* that bupropion/naltrexone improves HRQOL, physical functioning, cardiometabolic health, and HbA1c. • *Some evidence* that orlistat is not associated with improvement in HRQOL. • *Some evidence* that phentermine/topiramate is associated with improvements in HRQOL and SBP.	Comparisons across AOMs suggest that phentermine/topiramate achieves greater weight loss than bupropion/naltrexone.
FDA-approved GLP-1 AOMs for children and adolescents	*Conflicting evidence* regarding the impact of FDA-approved GLP-1 AOMs for children and adolescents. *Some evidence* that semaglutide improves weight loss and *some evidence* that liraglutide is not associated with improved weight loss. Tirzepatide is not approved for use in children and adolescents.	• *Some evidence* that semaglutide improves HRQOL and physical functioning. • *Some evidence* that liraglutide did not increase hypoglycemic episodes.	CHBRP did not identify any studies that directly compared the effectiveness of GLP-1 AOMs among children and adolescents.
FDA-approved non–GLP-1 AOMs for children and adolescents	*Conflicting evidence* regarding the impact of orlistat on weight loss. *Some evidence* that phentermine/topiramate improves weight loss. Bupropion/naltrexone and tirzepatide are not approved for use in children and adolescents.	*Some evidence* that orlistat and phentermine/topiramate are not associated with improvements in HRQOL, cardiometabolic health, or blood pressure.	CHBRP did not identify any studies that directly compared the effectiveness of non–GLP-1 AOMs among children and adolescents.

Type of Weight Management Intervention	Impact of Intervention on Weight Management	Impact of Intervention on Other Health Outcomes	Comparison of Interventions
Bariatric surgery for adults	*Very strong evidence* that bariatric surgery is effective, with studies reporting that patients lose significantly more weight after surgery compared to patients who received nonsurgical interventions.	*Very strong evidence* of improvement in diabetes remission rates, triglycerides and high-density lipoprotein cholesterol, and reduction in HbA1c and SBP and DBP.	*Strong evidence* favors bariatric surgery compared to nonsurgical interventions.
Bariatric surgery for children and adolescents	*Some evidence* that bariatric surgery is effective for adolescents with obesity, with studies reporting that adolescents lose significantly more weight and have reduced BMIs after surgery compared to similar adolescents who do not have surgery.	CHBRP did not identify any studies that reported on other health outcomes in adolescents.	*Some evidence* favors bariatric surgery compared to nonsurgical interventions.
IBT for adults	*Very strong evidence* that IBT for adults is associated with significantly greater weight loss.	*Very strong evidence* that IBT is associated with reduced risk of developing type 2 diabetes.	*Very strong evidence* that IBT for weight management is more effective than usual care, no intervention, minimal intervention, and being waitlisted for an intervention.
IBT for children and adolescents	*Very strong evidence* that IBT for weight management is effective in reducing weight and BMI for children and adolescents. IBT interventions with 26 or more hours of contact are more likely to yield greater weight loss compared to IBT interventions with fewer contact hours.	*Very strong evidence* that IBT is greater improvements in diabetes and blood pressure control.	*Very strong evidence* that IBT for weight loss is more effective than usual care, no intervention, minimal intervention, and being waitlisted for an intervention.

Source: California Health Benefits Review Program, 2025.
Note: Liraglutide, semaglutide, and tirzepatide are GLP-1s. Bupropion/naltrexone, orlistat, phentermine/topiramate, and phentermine are non–GLP-1s.
Key: AOM = anti-obesity medication; BMI = body mass index; CHBRP = California Health Benefits Review Program; DBP = diastolic blood pressure; FDA = U.S. Food and Drug Administration; GLP-1 = glucagon-like peptide-1; HbA1c = hemoglobin A1c; HRQOL = health-related quality of life; IBT = intensive behavioral therapy; SBP = systolic blood pressure.

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Benefit Coverage, Utilization, and Cost Impacts

As discussed in the *Policy Context* section, SB 535 would require health plans and health policies regulated by the Department of Managed Health Care (DMHC) or the California Department of insurance (CDI) to cover intensive behavioral therapy (IBT), bariatric surgery, and at least one U.S. Food and Drug Administration (FDA)-approved anti-obesity medication (AOM) indicated for chronic weight management in patients with obesity. In addition, SB 535 prohibits coverage criteria from being more restrictive than the FDA-approved indications for those treatments.

This section reports the potential incremental impacts of SB 535 on estimated baseline benefit coverage, utilization, and overall cost.

How does utilization impact premiums?

Health insurance, by design, distributes risk and expenditures across everyone enrolled in a plan or policy. It does so to help protect each enrollee from the full impact of health care costs that arise from that enrollee's use of prevention, diagnosis, and/or treatment of a covered medical condition, disease, or injury. Changes in utilization among any enrollees in a plan or policy can result in changes to premiums for all enrollees in that plan or policy.

Analytic Approach and Key Assumptions

As stated in the *Policy Context* section, this cost analysis is based on the interpretation that health plans and policies would comply with the mandate proposed in SB 535 if they covered at least one glucose-like peptide-1 (GLP-1) receptor agonist **or** one non–GLP-1 medication for the treatment of obesity. **CHBRP assumed that due to the cost of GLP-1 medications, health plans and policies not yet in compliance with SB 535 at baseline would become compliant by offering a non–GLP-1 medication due to the lower cost.** In addition, most enrollees (93.2%) already have existing coverage for non–GLP-1 medications, indicating the easiest path to compliance with SB 535 for the remaining plans and policies would be through non–GLP-1 coverage. The results of this analysis may be sensitive to the behavior of plan sponsors in response to the mandate, such as formulary placement and utilization management, especially related to GLP-1 medications.

The data sources, approach, and key assumptions used to analyze SB 535 are available in Appendix C. However, there are several notable assumptions related to the cost analysis provided here:

Medications

1. Based on the definition of "FDA-approved AOM" in SB 535 (see Appendix A), CHBRP assumed the bill would require coverage for GLP-1 and non–GLP-1 medications specifically indicated for treatment of obesity, rather than diabetes or other comorbidities. The GLP-1 medications applicable to SB 535 to treat obesity are Saxenda, Wegovy, and Zepbound. The non–GLP-1 medications covered by SB 535 to treat obesity are bupropion/naltrexone (Contrave), orlistat (Xenical, Alli), phentermine/topiramate (Qsymia), and phentermine (Adipex-P, Lomaira).

2. Previous barriers to obtaining GLP-1 medications due to supply chain problems would no longer constrain provider prescribing or patient access to GLP-1 medications for treatment of obesity. Due to resolution of supply chain barriers, the FDA will no longer allow compounding by third-party compounding pharmacies as of April 2025.

3. The unit cost for GLP-1 medications would be equivalent to the director-to-consumer programs[41] ($499 per 1-month supply) available to cash pay or patients without coverage for the medications through their health insurance. Both Wegovy and Zepbound have direct-to-consumer programs with the same per unit cost, and CHBRP assumes that negotiations between insurance carriers, their pharmacy benefit managers, and manufacturers would lead to a price point net of rebates of $499 for a 1-month supply. CHBRP assumed that the $499 unit cost for GLP-1 medications would not change due to SB 535.

4. The unit cost for non–GLP-1 medications is lower than that of GLP-1 medications and is calculated based on paid claims from Milliman's MyRxConsultant database and reduced to reflect pricing concessions due to manufacturer rebates. CHBRP assumes that manufacturer rebates would be 38% of the cost of brand versions of these drugs. See Appendix C for more details.

5. CHBRP estimated that 2.0% of enrollees with obesity and full coverage by their health plan would use non–GLP-1 medications. This is based upon comparing the observed relationship in utilization between GLP-1 medications and non–GLP-1 medications for weight loss for commercially-insured enrollees. This estimate is based upon current use patterns, provider prescriptions, and patient adherence.

Bariatric Surgery

1. Unit cost and utilization is based upon commercially insured enrollees in California during 2023 from Milliman's Consolidated Health Research Databases.

2. CHBRP identified bariatric surgeries based upon specific CPT codes (see Appendix C). CHBRP did not include any pre-operative office visits or other services which are likely to be immaterial.

3. To ensure inclusion of all professional services (anesthesia, surgical, etc.) and all facility services, the cost of bariatric surgery includes all linked medical claims for the case using logic from Milliman's Health Cost Guidelines – "Grouper." CHBRP relied upon the Facility Case ID from the "Grouper," which ties together professional claim lines with a facility counterpart.

4. All bariatric surgeries were included in CHBRP's analysis regardless of the patient's diagnoses. CHBRP is not currently aware of coverage for bariatric surgeries varying by whether the primary diagnosis is severe obesity or diabetes.

Intensive Behavioral Therapy

1. The number of enrollees using intensive behavioral therapy (IBT) at baseline was increased by a factor of two to account for the assumption that 50% of IBT is reimbursed to vendors through contracts that do not result in paid claims that appear in claims databases. The remainder of IBT is typically provided by vendors through capitation and results in encounter reporting.

2. Unit cost is based upon publicly available information from the Centers for Disease Control and Prevention (CDC), estimating that the cost per enrollee per year of a Diabetes Prevention Program (DPP) is $500. Note that DPP is the "gold standard" of IBT, therefore CHBRP assumed that most IBT was equivalent in price to DPP.[42]

[41] Direct-to-consumer programs are used by manufacturers to provide discounted prices to consumers who do not have coverage for a medication or who do not have insurance at all and have to pay out-of-pocket. One example is the LillyDirect Self Pay Pharmacy Solution.
[42] Communication with content expert, D. Thiara, MD, March 2025.

Cost Sharing

1. CHBRP assumed that cost sharing would be similar to average cost sharing (or average coinsurance) for a typical plan design within each metal level or deductible level. CHBRP assumed that cost sharing for IBT was $0 if covered by the health plan/insurer at baseline due to being considered a preventive service.

Almost all – 96.2% – commercial/California Public Employees' Retirement System (CalPERS) enrollees in plans and policies regulated by DMHC or CDI have a pharmacy benefit regulated by DMHC or CDI that covers both generic and brand-name outpatient prescription medications.[43] Of the remaining commercial/CalPERS enrollees, 1.2% do not have a pharmacy benefit and 2.6% have a pharmacy benefit that is not regulated by DMHC or CDI. Because SB 535 does not require creation of a pharmacy benefit – only compliant benefit coverage when a pharmacy benefit is present – baseline benefit coverage for enrollees without a pharmacy benefit or whose pharmacy benefit is not regulated by DMHC or CDI is assumed to be compliant.

For further details on the underlying data sources and methods used in this analysis, please see Appendix C.

Baseline and Postmandate Benefit Coverage

As discussed in the *Policy Context* section, SB 535 would apply to state-regulated health insurance, including commercial enrollees and enrollees with insurance through the CalPERS. It should be noted that DMHC regulates the plans and policies of approximately 74% of enrollees associated with CalPERS, in addition to commercial enrollees. [44]

CHBRP estimates that at baseline, 92.4% of enrollees with state-regulated insurance subject to the mandate are enrolled in plans or policies compliant with the AOM requirement of SB 535 because they already have coverage for non–GLP-1 medications. Only 7.6% of enrollees are in health plans or policies that do not cover non–GLP-1 AOMs at baseline. **Although 82.6% of enrollees do not have coverage for GLP-1 medications at baseline, the high levels of existing coverage for non–GLP-1 medications indicate that most plans and policies will maintain or achieve compliance with SB 535 through non–GLP-1 medication coverage due to the lower cost.** A total of 99.7% of enrollees have existing coverage for bariatric surgery, with 0.3% enrollees who do not have benefit coverage at baseline. Approximately 30,000 enrollees (0.2%) do not have coverage for IBT as required by SB 535. There are 13.54 million enrolled (99.8%) in plans or policies that are compliant with the IBT requirement in SB 535.

Baseline coverage of non–GLP-1 would increase by 7.30% due to SB 535 postmandate. The increase in bariatric surgery (0.26%) and IBT (0.22%) coverage from baseline would be much smaller, due to existing coverage for most enrollees.

Below, Table 9 provides estimates of how many Californians have health insurance that would have to comply with SB 535 in terms of benefit coverage.

Table 9. SB 535 Impacts on Benefit Coverage, 2026

		Postmandate Year 1 (2026)	Increase/Decrease	Change Postmandate
Total enrollees with health insurance subject to state benefit mandates*	22,207,000	22,207,000	0	0.00%
Total enrollees with health insurance subject to SB 535	13,570,000	13,570,000	0	0.00%

[43] For more detail, see CHBRP's resource *Pharmacy Benefit Coverage in State-Regulated Health Insurance*.
[44] For more detail, see CHBRP's resource, *Sources of Health Insurance in California*.

		Postmandate Year 1 (2026)	Increase/Decrease	Change Postmandate
Enrollees with coverage for obesity treatments				
Percentage of enrollees with coverage for GLP-1 AOMs	17.4%	17.4%	0.0%	0.00%
Percentage of enrollees with coverage for non–GLP-1 AOMs	93.2%	100.0%	6.8%	7.30%
Percentage of enrollees with coverage for bariatric surgery	99.7%	100.0%	0.3%	0.26%
Percentage of enrollees with coverage for IBT	99.8%	100.0%	0.2%	0.22%
Enrollees without coverage for obesity treatments				
Percentage of enrollees without coverage for GLP-1 AOMs	82.6%	82.6%	0.0%	0.00%
Percentage of enrollees without coverage for non–GLP-1 AOMs	6.8%	0.0%	−6.8%	−100.00%
Percentage of enrollees without coverage for bariatric surgery	0.3%	0.0%	−0.3%	−100.00%
Percentage of enrollees without coverage for IBT	0.2%	0.0%	−0.2%	−100.00%

Source: California Health Benefits Review Program, 2025.
Notes: * Enrollees in plans and policies regulated by DMHC or CDI. Includes those associated with Covered California, CalPERS, or Medi-Cal.[45]
Key: AOM = anti-obesity medication; CalPERS = California Public Employees' Retirement System; CDI = California Department of Insurance; DMHC = Department of Managed Health Care; IBT = intensive behavioral therapy; GLP = glucagon-like peptide.

Baseline and Postmandate Utilization and Unit Cost

Use of non–GLP-1 medications, bariatric surgery, and IBT would increase postmandate due to SB 535. Based on the existing coverage for non–GLP-1 medications (93.2%) and the disincentive to cover GLP-1 medications to comply with the mandate, it is expected that non–GLP-1 medication use would increase by 7.30% due to 4,047 enrollees newly obtaining insurance reimbursement (Table 2). Of that 4,047, 50% were previous users paying out-of-pocket who are now able to use insurance benefits to cover the cost of the medication. There would also be a reduction in the number of enrollees paying for non–GLP-1 medications out-of-pocket due to baseline lack of coverage. Due to high levels of baseline coverage for bariatric surgery and IBT, the increase in utilization of both would be small (an additional 4 enrollees would use bariatric surgery and 35 enrollees would use IBT in Year 1). There are no cost offsets due to a lack of evidence that non–GLP-1 use would decrease the use of emergency rooms, hospitalizations, or heart failure during the first year. While there is evidence that bariatric surgery could generate cost savings, so few people will gain coverage for bariatric surgery due to SB 535 that there is no cost impact in Year 1.

[45] For more detail, see CHBRP's resource, *Sources of Health Insurance in California*.

Average cost sharing for non–GLP-1 medications would increase by 1.71% postmandate due to the additional coverage required by SB 535. The 4,047 enrollees who would use non–GLP-1 medications due to SB 535 would face cost sharing for their prescriptions. Cost sharing for bariatric surgery (0.14%) and IBT (7.36%) would increase postmandate.

No impact on unit cost is expected due to SB 535. CHBRP estimates the unit cost of $499 for GLP-1 medications, which aligns with the current manufacturer's "direct-to-consumer" savings program. Non–GLP-1 medications unit cost is $9 per month for mostly generic prescription drugs. Bariatric surgery's unit cost is $30,059 based on paid claims from the Milliman database, and IBT is $500 per year (see assumptions above).

Below, Table 10 provides estimates of the impacts of SB 535 on utilization and unit cost of GLP-1 and non–GLP-1 medications, bariatric surgery, and IBT.

Table 10. Impacts of SB 535 on Utilization and Unit Cost, 2026

	Baseline (2026)	Postmandate Year 1 (2026)	Increase/ Decrease	Change Postmandate
Eligible populations				
Number of enrollees with obesity	3,065,012	3,065,012	—	0.00%
Number of overweight enrollees with comorbidities	756,350	756,350	—	0.00%
Utilization with coverage				
Number of enrollees using GLP-1 AOM	37,632	37,632	—	0.00%
Number of enrollees using non–GLP-1 AOM	53,318	57,365	4,047	7.59%
Number of enrollees receiving bariatric surgery	1,581	1,585	4	0.26%
Number of enrollees receiving IBT	16,281	16,316	35	0.22%
Utilization without coverage				
Number of enrollees using GLP-1 AOM	42,813	42,813	—	0.00%
Number of enrollees using non–GLP-1 AOM	2,023	-	(2,023)	-100.00%
Number of enrollees receiving bariatric surgery	—	—	—	0.00%
Number of enrollees receiving IBT	—	—	—	0.00%
Average unit cost				
Average unit cost of GLP-1 AOM (30-day supply)	$499	$499	$0.00	0.00%
Average unit cost of non–GLP-1 AOM	$9	$9	$0.00	0.00%

	Baseline (2026)	Postmandate Year 1 (2026)	Increase/ Decrease	Change Postmandate
Average unit cost of bariatric surgery	$30,059	$30,059	$0.00	0.00%
Average unit cost of IBT (1 year of therapy)	$500	$500	$0.00	0.00%
Average cost sharing				
Average cost sharing for GLP-1 AOM	$57.75	$57.75	$0.00	0.00%
Average cost sharing for non–GLP-1 AOM	$1.21	$1.23	$0.02	1.71%
Average cost sharing for bariatric surgery	$3,641.44	$3,646.49	$5.05	0.14%
Average cost sharing for IBT	$2.07	$2.22	$0.15	7.36%

Source: California Health Benefits Review Program, 2025.
Key: AOM = anti-obesity medication; GLP-1 = glucagon-like peptide-1; IBT = intensive behavioral therapy.

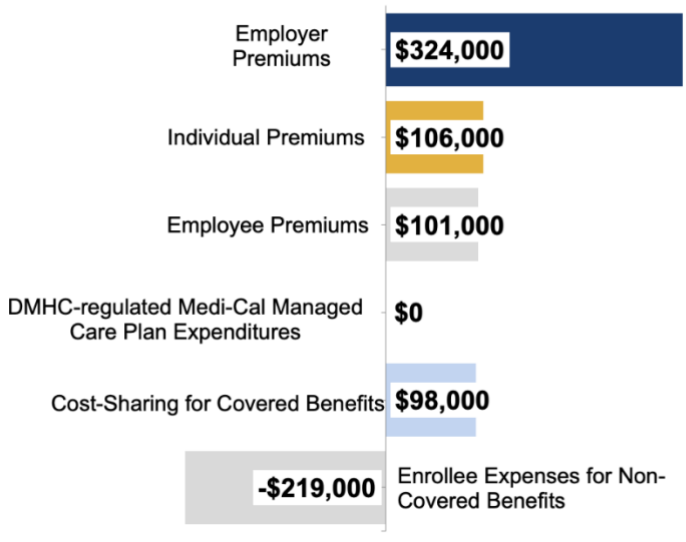
Baseline and Postmandate Expenditures

For DMHC-regulated plans and CDI-regulated policies, SB 535 would increase total premiums paid by employers and enrollees for newly covered benefits. Enrollee expenses for covered benefits would increase, while those for noncovered benefits would decrease. This would result in an increase of total net annual expenditures for enrollees with DMHC-regulated plans and CDI-regulated policies.

CHBRP estimates total annual net expenditures would increase by $410,000 (0.000024%) due to SB 535, with the majority from increased coverage of non–GLP-1 drugs. Notably, expenditures for noncovered benefits at baseline would decrease by $219,000 due to new non–GLP-1 coverage postmandate. However, cost sharing related to the new coverage would increase by $98,000 overall across all enrollees (Figure 11).

On the next page, Table 11 provides estimates of the impacts of SB 535 on expenditures, which include premiums, enrollee cost sharing, and enrollee expenses for noncovered benefits.

Figure 11. Expenditure Impacts of SB 535



Source: California Health Benefits Review Program, 2025.
Key: DMHC = Department of Managed Health Care.

Table 11. SB 535 Impacts on Expenditures, 2026

	Baseline (2026)	Postmandate Year 1 (2026)	Increase/ Decrease	Percentage Change
Premiums				
Employer-sponsored (a)	$68,752,638,000	$68,752,962,000	$324,000	0.00%
CalPERS employer (b)	$7,881,873,000	$7,881,873,000	$0	0.00%
Medi-Cal (excludes COHS) (c)	$31,818,731,000	$31,818,731,000	$0	0.00%
Enrollee premiums (expenditures)				
Enrollees, individually purchased insurance	$21,757,790,000	$21,757,896,000	$106,000	0.00%
Outside Covered California	$6,011,399,000	$6,011,409,000	$10,000	0.00%
Through Covered California	$15,746,391,000	$15,746,487,000	$96,000	0.00%
Enrollees, group insurance (d)	$21,712,866,000	$21,712,967,000	$101,000	0.00%
Enrollee out-of-pocket expenses				
Cost sharing for covered benefits (deductibles, copayments, etc.)	$18,992,422,000	$18,992,520,000	$98,000	0.00%
Expenses for noncovered benefits (e) (f)	$256,585,000	$256,366,000	−$219,000	−0.09%
Total expenditures	**$171,172,905,000**	**$171,173,315,000**	**$410,000**	**0.00%**

Source: California Health Benefits Review Program, 2025.
Notes: (a) In some cases, a union or other organization. Excludes CalPERS.
(b) Includes only CalPERS enrollees in DMHC-regulated plans. Approximately 54.0% are state retirees, state employees, or their dependents. About one in five (20.5%) of these enrollees has a pharmacy benefit not subject to DMHC. CHBRP has projected no impact for those enrollees. However, CalPERS could, postmandate, require equivalent coverage for all its members (which could increase the total impact on CalPERS).
(c) Includes only Medi-Cal beneficiaries enrolled in DMHC-regulated plans. In addition, CHBRP is estimating it seems likely that there would also be a proportional increase of $0 million for Medi-Cal beneficiaries enrolled in COHS managed care.
(d) Enrollee premium expenditures include contributions by enrollees to employer (or union or other organization)-sponsored health insurance, health insurance purchased through Covered California, and any contributions to enrollment through Medi-Cal to a DMHC-regulated plan.
(e) Includes only expenses paid directly by enrollees (or other sources) to providers for services related to the mandated benefit that are not covered by insurance at baseline. This only includes those expenses that will be newly covered postmandate. Other components of expenditures in this table include all health care services covered by insurance.
(f) For covered benefits, such expenses would be eliminated, although enrollees with newly compliant benefit coverage might pay some expenses if benefit coverage is denied (through utilization management review).
Key: CalPERS = California Public Employees' Retirement System; CDI = California Department of Insurance; COHS = County Organized Health Systems; DMHC = Department of Managed Health Care

Premiums

At the end of this section, Table 12 and Table 13 present baseline and postmandate expenditures by market segment for DMHC-regulated plans and CDI-regulated policies. The tables present per member per month (PMPM) premiums, enrollee expenses for both covered and noncovered benefits, and total expenditures (premiums as well as enrollee expenses).

Changes in premiums as a result of SB 535 would vary by market segment. Note that such changes are related to the number of enrollees (see Table 9, Table 12, and Table 13), with health insurance that would be subject to SB 535.

Commercial

The largest premium increases will occur in the CDI-regulated small-group market, with a 0.0149% increase. The CDI-regulated individual market would see no change in premiums.

Premiums would not increase for DMHC-regulated Covered California small-group market plan enrollees, or for mirror plans available in the small-group market outside of Covered California. Premiums for DMHC-regulated individual market plans available through Covered California would increase by 0.0006%, whereas mirror plans available outside of Covered California would increase by 0.0002%.

CalPERS

For enrollees associated with CalPERS in DMHC-regulated plans, premiums would not change.

Enrollee Expenses

SB 535–related changes in cost sharing for covered benefits (deductibles, copays, etc.) and out-of-pocket expenses for noncovered benefits would vary by market segment. Note that such changes are related to the number of enrollees (see Table 9, Table 12, and Table 13) with health insurance that would be subject to SB 535 expected to use the relevant treatments during the year after enactment.

CHBRP projects no change to copayments or coinsurance rates but does project an increase in utilization of non–GLP-1 drugs, bariatrics surgeries, and IBT and therefore an increase in enrollee cost sharing.

It is possible that some enrollees incurred expenses related to treatments for which coverage was denied, but CHBRP cannot estimate the frequency with which such situations occur and so cannot offer a calculation of impact. However, CHBRP does estimate that enrollees purchasing non–GLP-1 drugs self-pay due to the lack of coverage at baseline will result in a $219,000 decrease in enrollee spending on noncovered benefits.

The largest decreases in enrollee spending related to noncovered benefits will occur in the CDI-regulated small group other nongrandfathered market ($0.0065 PMPM), whereas the smallest decrease is in the DMHC-regulated small-group Covered California, DMHC-regulated small-group mirror, DMHC-regulated individual market other nongrandfathered, and CDI-regulated individual grandfathered markets (0% change).

Per-user enrollee expenses

Total enrollee expenditures would increase overall due to SB 535. All markets exhibit increases of between $0.1381 PMPM (CDI-regulated small group) and $0.0015 PMPM (DMHC-regulated large group).

The presence of a deductible not yet met for the year[46] could result in the enrollee paying the full unit cost, but hitting the annual out-of-pocket maximum[47] would result in the enrollee having no further cost sharing.

Postmandate Administrative and Other Expenses

CHBRP estimates that the increase in administrative costs of DMHC-regulated plans and/or CDI-regulated policies will remain proportional to the increase in premiums. CHBRP assumes that if health care costs increase as a result of increased utilization or changes in unit costs, there is a corresponding proportional increase in administrative costs.

[46] For estimates of enrollees in plans and policies with deductibles, see CHBRP's resource, *Deductibles in State-Regulated Health Insurance*.
[47] For most enrollees in most plans and policies regulated by DMHC or CDI, applicable copays and coinsurance is limited to $250, or $500 for enrollees in the "bronze plans" available from Covered California, the state's ACA marketplace (HSC 1342.73; INS 10123.1932). Cost sharing could be higher for an enrollee in a plan or policy that includes a deductible.

CHBRP assumes that the administrative cost portion of premiums is otherwise unchanged. All health plans and insurers impacted by this mandate include a component for administration and profit in their premiums.

Other Considerations for Policymakers

In addition to the impacts a bill may have on benefit coverage, utilization, and cost, related considerations for policymakers are discussed below.

Postmandate Changes in the Number of Uninsured Persons

Because the change in average premiums does not exceed 1% for any market segment (see Table 11, Table 12, and Table 13) in Year 1, CHBRP would expect no measurable change in the number of uninsured persons due to the enactment of SB 535.

Changes in Public Program Enrollment

CHBRP estimates that the mandate would produce no measurable impact on enrollment in publicly funded insurance programs due to the enactment of SB 535.

How Lack of Benefit Coverage Results in Cost Shifts to Other Payers

There does not appear to be cost shifting to other public payers or programs at baseline.

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Table 12. Baseline Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2026

	DMHC-Regulated						CDI-Regulated			Total
	Commercial Plans (by Market) (a)			Publicly Funded Plans			Commercial Policies (by Market) (a)			
	Large Group	*Small Group*	*Individual*	*CalPERS (b)*	*Medi-Cal (Excludes COHS) (c)*		*Large Group*	*Small Group*	*Individual*	
					Under 65	*65+*				
Enrollee counts										
Total enrollees in plans/policies subject to state mandates (d)	8,034,000	2,076,000	2,181,000	914,000	7,787,000	850,000	264,000	65,000	36,000	22,207,000
Total enrollees in plans/policies subject to SB 535	8,034,000	2,076,000	2,181,000	914,000	0	0	264,000	65,000	36,000	13,570,000
Premiums										
Average portion of premium paid by employer (e)	$557.33	$507.76	$0.00	$718.62	$276.79	$583.72	$609.11	$567.83	$0.00	$108,453,242,000
Average portion of premium paid by enrollee	$145.58	$212.63	$818.51	$139.09	$0.00	$0.00	$224.25	$185.49	$777.47	$43,470,656,000
Total premium	**$702.91**	**$720.39**	**$818.51**	**$857.71**	**$276.79**	**$583.72**	**$833.35**	**$753.32**	**$777.47**	**$151,923,898,000**
Enrollee expenses										
Cost sharing for covered benefits (deductibles, copays, etc.)	$64.42	$164.36	$272.54	$81.59	$0.00	$0.00	$122.99	$249.30	$173.93	$18,992,422,000
Expenses for noncovered benefits (f)	$1.46	$1.71	$2.14	$1.46	$0.00	$0.00	$0.32	$0.65	$0.00	$256,585,000
Total expenditures	**$768.79**	**$886.45**	**$1,093.19**	**$940.76**	**$276.79**	**$583.72**	**$956.66**	**$1,003.28**	**$951.40**	**$171,172,905,000**

Source: California Health Benefits Review Program, 2025.
Notes: (a) Includes enrollees with grandfathered and nongrandfathered health insurance acquired outside or through Covered California (the state's health insurance marketplace).
(b) Includes only CalPERS enrollees in DMHC-regulated plans. Approximately 51.6% are state retirees, state employees, or their dependents. About one in five (20.5%) of these enrollees has a pharmacy benefit not subject to DMHC.[48] CHBRP has projected no impact for those enrollees. However, CalPERS could, postmandate, require equivalent coverage for all its members (which could increase the total impact on CalPERS).
(c) Includes only Medi-Cal beneficiaries enrolled in DMHC-regulated plans. Includes those who are also Medicare beneficiaries.
(d) Enrollees in plans and policies regulated by DMHC or CDI. Includes those associated with Covered California, CalPERS, or Medi-Cal.[49]
(e) In some cases, a union or other organization – or Medi-Cal for its beneficiaries.
(f) Includes only those expenses that are paid directly by enrollees (or other sources) to providers for services related to the mandated benefit that are not covered by insurance at baseline. This only includes those expenses that will be newly covered, postmandate. Other components of expenditures in this table include all health care services covered by insurance.
Key: CalPERS = California Public Employees' Retirement System; CDI = California Department of Insurance; COHS = County Organized Health Systems; DMHC = Department of Managed Health Care.

[48] For more detail, see CHBRP's resource *Pharmacy Benefit Coverage in State-Regulated Health Insurance*.
[49] For more detail, see CHBRP's resource *Sources of Health Insurance in California*.

Table 13. Postmandate Change in Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2026

	DMHC-Regulated						CDI-Regulated			
	Commercial Plans (by Market) (a)			Publicly Funded Plans			Commercial Policies (by Market) (a)			
	Large Group	*Small Group*	*Individual*	*CalPERS (b)*	*Medi-Cal (Excludes COHS) (c)*		*Large Group*	*Small Group*	*Individual*	Total
					Under 65	*65+*				
Enrollee counts										
Total enrollees in plans/policies subject to state mandates (d)	8,034,000	2,076,000	2,181,000	914,000	7,787,000	850,000	264,000	65,000	36,000	22,207,000
Total enrollees in plans/policies subject to SB 535	8,034,000	2,076,000	2,181,000	914,000	0	0	264,000	65,000	36,000	13,570,000
Premiums										
Average portion of premium paid by employer (e)	$0.0018	$0.0023	$0.0000	$0.0000	$0.0000	$0.0000	$0.0075	$0.0849	$0.0000	$324,000
Average portion of premium paid by enrollee	$0.0005	$0.0010	$0.0040	$0.0000	$0.0000	$0.0000	$0.0028	$0.0277	$0.0000	$206,000
Total premium	**$0.0023**	**$0.0033**	**$0.0040**	**$0.0000**	**$0.0000**	**$0.0000**	**$0.0103**	**$0.1126**	**$0.0000**	**$530,000**
Enrollee expenses										
Cost sharing for covered benefits (deductibles, copays, etc.)	$0.0002	$0.0007	$0.0013	$0.0000	$0.0000	$0.0000	$0.0007	$0.0320	$0.0000	$98,000
Expenses for noncovered benefits (f)	-$0.0010	-$0.0018	-$0.0026	$0.0000	$0.0000	$0.0000	-$0.0004	-$0.0065	$0.0000	-$220,000
Total expenditures	**$0.0015**	**$0.0022**	**$0.0027**	**$0.0000**	**$0.0000**	**$0.0000**	**$0.0105**	**$0.1381**	**$0.0000**	**$408,000**
Postmandate percent change										
Percent change insured premiums	0.0003%	0.0005%	0.0005%	0.0000%	0.0000%	0.0000%	0.0012%	0.0149%	0.0000%	0.0003%
Percent change total expenditures	0.0002%	0.0003%	0.0002%	0.0000%	0.0000%	0.0000%	0.0011%	0.0138%	0.0000%	0.0002%

Source: California Health Benefits Review Program, 2025.
Notes: (a) Includes enrollees with grandfathered and nongrandfathered health insurance acquired outside or through Covered California (the state's health insurance marketplace).
(b) Includes only CalPERS enrollees in DMHC-regulated plans. Approximately 51.6% are state retirees, state employees, or their dependents. About one in five (20.5%) of these enrollees has a pharmacy benefit not subject to DMHC.[50] CHBRP has projected no impact for those enrollees. However, CalPERS could, postmandate, require equivalent coverage for all its members (which could increase the total impact on CalPERS)..
(c) Includes only Medi-Cal beneficiaries enrolled in DMHC-regulated plans. Includes those who are also Medicare beneficiaries.
(d) Enrollees in plans and policies regulated by DMHC or CDI. Includes those associated with Covered California, CalPERS, or Medi-Cal.[51]
(e) In some cases, a union or other organization, or Medi-Cal for its beneficiaries.
(f) Includes only those expenses that are paid directly by enrollees (or other sources) to providers for services related to the mandated benefit that are not covered by insurance at baseline. This only includes those expenses that will be newly covered, postmandate. Other components of expenditures in this table include all health care services covered by insurance.
Key: CalPERS = California Public Employees' Retirement System; CDI = California Department of Insurance; COHS = County Organized Health Systems; DMHC = Department of Managed Health Care.

[50] For more detail, see CHBRP's resource *Pharmacy Benefit Coverage in State-Regulated Health Insurance*.
[51] For more detail, see CHBRP's resource *Sources of Health Insurance in California*.

Public Health Impacts

As discussed in the *Policy Context* section, SB 535 would mandate coverage for at least one U.S. Food and Drug Administration (FDA)-approved anti-obesity medication (AOM), intensive behavioral therapy (IBT), and bariatric surgery for the treatment of obesity.

The public health impact analysis includes estimated impacts in the short term (within 12 months of implementation) and in the long term (beyond the first 12 months postmandate). This section estimates the short-term impact[52] of SB 535 on change in body weight and additional health-related outcomes, barriers to diagnosis and treatment, potential treatment harms, and potential disparities. See the *Long-Term Impacts* section for discussion of premature death, economic loss, and social drivers of health.

Estimated Public Health Outcomes

Measurable health outcomes relevant to SB 535 include primary outcomes such as change in body weight of 5%, 10%, 15%, or 20%, percent excessive weight loss, and mean body mass index (BMI) change. Additional health-related outcomes included diabetes risk, glycated hemoglobin, systolic blood pressure, diastolic blood pressure, waist circumference, functional quality of life, and harms of FDA-approved weight management drugs and complications from bariatric surgery.

As presented in the *Medical Effectiveness* section, there is *strong evidence* that FDA-approved non-GLP-1 AOMs, and *very strong evidence* that bariatric surgery, and IBT are all effective for weight management in adults. The evidence is not as strong for children and adolescents, where there is *some evidence* for FDA-approved non–GLP-1 AOMs – although this varies by drug – *some evidence* of effectiveness for bariatric surgery, and *very strong evidence* for intensive behavioral therapy.

As presented in the *Benefit Coverage, Utilization, and Cost Impacts* section, at baseline, it is estimated that among enrollees with health insurance that would be subject to SB 535, there are currently high levels of coverage for bariatric surgery (99.7%), IBT (99.8%), and SB 535 compliant coverage for FDA-approved AOMs (93.2%).

It is estimated that as a result of SB 535, **utilization of obesity treatments would increase** as follows for the approximately 13.6 million enrollees (36% of all Californians) with health insurance that would be subject to SB 535:

- 4,047 enrollees using FDA-approved AOMs;
- 4 enrollees receiving bariatric surgery; and
- 35 enrollees receiving intensive behavioral therapy (IBT) for weight loss.

Based on the literature review presented in *Medical Effectiveness*, it is estimated that across these 4,086 new utilizers of obesity treatments, they would have an average weight loss of between 3% and 14% compared to nonutilizers. The level of weight loss would depend on a number of factors including the specific treatment utilized and specific patient-level factors. In addition, there would be, on average, some level of improvement in obesity-related health outcomes such as decreased diabetes risk and improvement in hemoglobin (A1C) levels, improvement in blood pressure, and improved functional quality of life.

[52] CHBRP defines short-term impacts as changes occurring within 12 months of bill implementation.

In the first year postmandate, 13.6 million enrollees with health insurance subject to SB 535 would experience a change in benefit coverage and 4,086 would newly utilize obesity treatments. As a result, these enrollees would experience a 3% to 14% reduction in body weight by and related health improvements, which is supported by evidence that obesity treatments are medically effective.

Potential Harms From SB 535

When data are available, CHBRP estimates the marginal change in relevant harms associated with interventions affected by the proposed mandate. In the case of SB 535, there is evidence to suggest that an increase in the use of obesity treatments could result in harm. Potential harms associated with the use of FDA-approved drugs for weight management include gastrointestinal-related symptoms, including nausea, constipation, diarrhea, and dyspepsia (i.e., discomfort or pain in the upper abdomen); paresthesia (i.e., burning or prickling sensation, often occurring in the hands, arms, legs, or feet); dry mouth; insomnia; irritability; anxiety; headache; and increased blood pressure and heart rate. Adverse events may contribute to discontinuation of the drug, which can impact overall medical effectiveness of the treatment. It is unclear if long-term use is associated with more severe and persistent harms.

Impact on Disparities[53]

As described in the *Background* section, there are many factors that serve as barriers to seeking and accessing obesity treatments. These barriers can serve to create disparities in rates of utilization of obesity treatments and overall rates of obesity. Each of these factors and the impact that SB 535 may have on addressing these barriers and resulting disparities is described below.

- **Stigma:** It is unclear how SB 535 would impact stigma surrounding obesity and obesity treatments.
- **Racism and discrimination:** There is no evidence to suggest that SB 535 would decrease racism and discrimination related to obesity diagnosis and treatment. Therefore, it is unlikely that SB 535 would reduce racial and ethnic disparities in obesity rates or treatment for obesity.
- **Location:** It is possible that people living in rural areas who are more likely to face challenges in accessing obesity treatments may benefit from SB 535 if an increase in coverage for weight management drugs includes medications available via mail that could be sent to individuals living in more remote settings.
- **Expense:** The high cost of some obesity treatments makes them inaccessible for patients with lower incomes (Levi et al., 2023). As SB 535 is not expected to increase coverage for and utilization of the higher-cost, FDA-approved medications for weight management (i.e. GLP-1s) there is no expected reduction in disparities by income as a result of the bill.

Benefit Mandate Structure and Unequal Racial/Ethnic Health Impacts

SB 535 applies to the health insurance of enrollees in CDI-regulated policies and other enrollees in DMHC-regulated plans but would not be applicable to the health insurance of Medi-Cal beneficiaries enrolled in DMHC-regulated plans. As Medi-Cal beneficiaries already have coverage for the treatments included under SB 535 (i.e., GLP-1 and non–GLP-1 drugs with FDA indication for weight management, bariatric surgery, and IBT for weight loss), the exclusion of Medi-Cal beneficiaries from SB 535 would not result in disparities in coverage for obesity treatments.

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[53] For details about CHBRP's methodological approach to analyzing disparities, see the *Benefit Mandate Structure and Unequal Racial/Ethnic Health Impacts* document.

Long-Term Impacts

In this section, CHBRP estimates the long-term impact of SB 535, which CHBRP defines as impacts occurring beyond the first 12 months after implementation. These estimates are qualitative and based on the existing evidence available in the literature. CHBRP does not provide quantitative estimates of long-term impacts because of unknown improvements in clinical care, changes in prices, implementation of other complementary or conflicting policies, and other unexpected factors.

Long-Term Utilization and Cost Impacts

Due to the high levels of existing coverage for non–glucagon-like peptide-1 (non–GLP-1) medications, bariatric surgery, and IBT, CHBRP estimates that the level of use would be fairly stable. Over time, as the price of GLP-1 medications decreases and/or generics become available, it is possible that health plans and policies would comply through coverage of GLP-1 options, if the clinical benefits and potential savings outweigh the cost. That would increase spending on GLP-1 medications, though there are limited offsets related to emergency room use and hospitalization for heart failure. GLP-1 medications, which are more expensive and are unlikely to be covered due to SB 535, generate reductions in heart failure between 12 and 18 months from initiation. Non–GLP-1 medications do result in moderate weight loss, but there is no evidence to suggest use of non–GLP-1 medications would reduce other types of emergency room, physician office, or hospital utilization. Non–GLP-1 medications do not generate the same potential decreases in costs as GLP-1 medications, resulting in stable impacts long term due to SB 535 compliance.

Long-Term Public Health Impacts

Some interventions in proposed mandates provide immediate measurable impacts (e.g., maternity service coverage or acute care treatments), whereas other interventions may take years to make a measurable impact (e.g., coverage for tobacco cessation or vaccinations). When possible, CHBRP estimates the long-term effects (beyond 12 months postmandate) to the public's health that would be attributable to the mandate, including impacts disparities, premature death, and economic loss.

In the case of SB 535 CHBRP estimates approximately 4,086 enrollees would newly use treatments for obesity within 1-year postmandate. It is estimated that these individuals would lose between 3% and 14% of their body weight. Therefore, public health impacts would be likely to accrue to these individuals outside of the 1-year time frame as they continue to lose and maintain their weight loss. As reported in the *Medical Effectiveness* section, there was limited evidence to evaluate the long-term benefits of obesity treatments, particularly regarding persistent use of medication and sustained weight loss after discontinuation. For example, evidence suggests that individuals taking orlistat (Xenical) may begin to regain weight 18 to 48 months after stopping the medication — though long-term weight loss is maintained when lifestyle modifications are adopted alongside pharmacotherapy. Therefore, although this limited evidence suggests that we would continue to see a reduction in the overall prevalence of obesity and obesity-related chronic disease, including a reduction in cardiovascular disease, hypertension (i.e., high blood pressure), type 2 diabetes, and certain types of cancer, the magnitude of these benefits is unknown.

Impacts on Premature Death and Economic Loss

Premature death

Premature death, measured by years of potential life lost (YPLL), is often defined as death occurring before the age of 75 years (NCI, 2019).[54] Fontaine et al. (2003) found that the life expectancy for an adult with a class 3 obesity (i.e., BMI > 45) reduced by a range of 5 to 20 YPLL — depending on sex and race and ethnicity. Specifically, overweight men aged 20 to 39 years lost an estimated 2.7 years of life, whereas obese and severely obese (i.e. class 2 or class 3 obesity) men lost

[54] For more information about CHBRP's public health methodology, see http://chbrp.com/analysis_methodology/public_health_impact_analysis.php.

5.9 and 8.4 years, respectively, compared to men with a healthy body weight (Grover et al., 2015). Additionally, obese women in the same age group experienced up to 6.1 years of life lost, with the highest impact seen in younger individuals. Increased body weight was also associated with a significant reduction in healthy life years, with young severely obese men losing 18.8 years and young very obese women losing 19.1 years (Grover et al., 2015). According to the CDC Wonder online database, 881 adult deaths in California were directly attributed to obesity, equal to a rate of 3.0 per 100,000 persons, in 2023 (CDC, 2023a). Although SB 535 has the potential to impact premature death, the extent to which this may occur is unknown.

Economic loss

Economic loss associated with disease is generally presented in the literature as an estimation of the value of the YPLL in dollar amounts (i.e., valuation of a population's lost years of work over a lifetime). In addition, morbidity associated with the disease or condition of interest can also result in lost productivity by causing a worker to miss days of work due to illness or acting as a caregiver for someone else who is ill.

Cawley et al. (2021b) found that obesity increases job absenteeism (either due to injury or illness) by an average of 4.68 days per year per obese individual in California. In addition, they estimated that each additional unit of BMI increased the average number of days of work lost by 0.20 days per year. This translated into productivity losses ranging from $1.1 billion to $2.1 billion in productivity losses per year in California.[55] It is estimated that SB 535 would increase utilization of obesity treatments by 2,260 people per year. Assuming an average weight loss of 8.5% (i.e., the mid-point of the range of 3%-14%), this would translate into an approximate decrease in lost productivity of 2,600 days per year or $300,000 to $600,000 per year. This savings would grow over time as the cumulative pool of people who have lost weight using obesity treatments grows, assuming persistent use of medication and sustained weight loss. Similarly, estimates across the United States have shown that a reduction in the average BMI by 5% could save nearly $30 billion in 5 years, save more than $150 billion in 10 years, and more than $600 billion in 20 years (Wang et al., 2011).

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[55] Translated into 2025 dollars using https://www.usinflationcalculator.com/

Appendix A. Text of Bill Analyzed

On February 21, 2025 the California Senate Committee on Health requested that CHBRP analyze SB 535 as introduced on February 20, 2025.

Below is the bill language, as it was introduced on February 20, 2025.

CALIFORNIA LEGISLATURE— 2025–2026 REGULAR SESSION

SENATE BILL

NO. 535

Introduced by Senator Richardson

February 20, 2025

An act to add Section 1374.6 to the Health and Safety Code, and to add Section 10123.62 to the Insurance Code, relating to health care coverage.

LEGISLATIVE COUNSEL'S DIGEST

SB 535, as introduced, Richardson. Obesity Treatment Parity Act.

Existing law, the Knox-Keene Health Care Service Plan Act of 1975, provides for the licensure and regulation of health care service plans by the Department of Managed Health Care and makes a willful violation of the act's requirements a crime. Existing law provides for the regulation of disability and health insurers by the Department of Insurance. Existing law sets forth specified coverage requirements for plan contracts and insurance policies.

This bill, the Obesity Treatment Parity Act, would require an individual or group health care service plan contract or health insurance policy that provides coverage for outpatient prescription drug benefits and is issued, amended, or renewed on or after January 1, 2026, to include coverage for intensive behavioral therapy for the treatment of obesity, bariatric surgery, and at least one antiobesity medication approved by the United States Food and Drug Administration. Because a willful violation of these provisions by a health care service plan would be a crime, the bill would impose a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

DIGEST KEY

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: yes

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BILL TEXT

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. This act shall be known, and may be cited, as the Obesity Treatment Parity Act.

SEC. 2. The Legislature finds and declares all of the following:

(a) Obesity is a serious chronic disease that is recognized as such by major medical organizations, including the American Medical Association since 2013, the American Association of Clinical Endocrinology, the American College of Cardiology, the Endocrine Society, the American Society for Reproductive Medicine, the Society for Cardiovascular Angiography and Interventions, the American Urological Association, and the American College of Surgeons.

(b) Obesity is a complex chronic disease, one in which genetics, the environment, and biology all play important factors.

(c) Obesity is linked to more than 200 comorbid conditions.

(d) Obesity is associated with an increased risk of 13 types of cancer.

(e) From 2005 to 2014, most cancers associated with obesity and being overweight increased in the United States, while cancers associated with other factors decreased.

(f) Obesity reduces a patient’s overall survival rate and cancer-specific survival rate, as well as increases the risk of cancer recurrence.

(g) Obesity disproportionately affects communities of color.

(h) Obesity is impacted by socioeconomic status.

(i) Adults suffering from obesity have a 55-percent higher risk of developing depression over their lifetime.

(j) Obesity accounts for 47 percent of the total cost of chronic diseases in the United States.

(k) Obesity is a highly stigmatized disease.

(l) Barriers to accessing obesity treatments include stigma, racism, and discrimination.

(m) The California Code of Regulations currently requires coverage of outpatient prescription drugs for the treatment of obesity, but only when a patient is diagnosed with “morbid obesity,” modernly referred to as “severe obesity.”

(n) Chronic diseases without the stigma, racism, and discrimination of obesity do not require patients to reach the designation of “morbid” to be worthy of treatment options that include outpatient prescription drugs.

(o) The Obesity Treatment Parity Act would address health equity gaps and social determinants of health for Californians by ensuring the full range of treatment options are available to patients, without them having to reach a level of obesity considered “morbid.”

SEC. 3. Section 1374.6 is added to the Health and Safety Code, to read:

1374.6. (a) An individual or group health care service plan contract that provides coverage for outpatient prescription drug benefits and is issued, amended, or renewed on or after January 1, 2026, shall include coverage for all of the following for the treatment of obesity:

(1) Intensive behavioral therapy.

(2) Bariatric surgery.

(3) At least one FDA-approved antiobesity medication.

(b) This section does not prohibit a plan from applying utilization management to determine the medical necessity for treatment of obesity under this section if appropriateness and medical necessity determinations are made in the same manner as those determinations are made for the treatment of any other illness, condition, or disorder covered by a contract.

(c) Coverage criteria for FDA-approved antiobesity medications shall not be more restrictive than the FDA-approved indications for those treatments.

(d) For purposes of this section, “FDA-approved antiobesity medication” means a medication approved by the United States Food and Drug Administration with an indication for chronic weight management in patients with obesity.

(e) This section does not apply to a specialized health care service plan contract that covers only dental or vision benefits or a Medicare supplement contract.

SEC. 4. Section 10123.62 is added to the Insurance Code, to read:

10123.62. (a) An individual or group health insurance policy that provides coverage for outpatient prescription drug benefits and is issued, amended, or renewed on or after January 1, 2026, shall include coverage for all of the following for the treatment of obesity:

(1) Intensive behavioral therapy.

(2) Bariatric surgery.

(3) At least one FDA-approved antiobesity medication.

(b) This section does not prohibit an insurer from applying utilization management to determine the medical necessity for treatment of obesity under this section if appropriateness and medical necessity determinations are made in the same manner as those determinations are made for the treatment of any other illness, condition, or disorder covered by a policy.

(c) Coverage criteria for FDA-approved antiobesity medications shall not be more restrictive than the FDA-approved indications for those treatments.

(d) For purposes of this section, “FDA-approved antiobesity medication” means a medication approved by the United States Food and Drug Administration with an indication for chronic weight management in patients with obesity.

(e) This section does not apply to a specialized health insurance policy that covers only dental or vision benefits or a Medicare supplement policy.

SEC. 5. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

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Appendix B. Detailed Medical Effectiveness Study Findings for FDA-Approved AOMs

Study	Study Design and Size	Comorbidity (if Any)	Intervention	Findings
Liraglutide 3.0 mg (Saxenda)				
Adults				
Gudbergsen et al. (2021)	RCT (n = 156)	Symptomatic knee osteoarthritis	Liraglutide vs. placebo	• Significantly greater reductions in BW and WC with liraglutide at 52 weeks. • Significantly higher proportion of liraglutide participants with ≥5% weight loss.
Atlas et al. (2022) (a)	Evidence review of six RCTs (n = 5,825)	With and without diabetes	Liraglutide plus lifestyle intervention or IBT vs. placebo plus lifestyle intervention or IBT	• Greater percent BW loss with liraglutide treatment ranging between 32-56 weeks. • Higher proportions of liraglutide participants with ≥5% and ≥10% weight loss.
Shi et al. (2024) (b)	Systematic review and meta-analysis	—	Liraglutide plus lifestyle modification vs. lifestyle modification alone	• Significantly greater percent BW loss with liraglutide. • Significantly higher proportions of liraglutide participants with ≥5% and ≥10% weight loss.
Children and adolescents				
Cornejo-Estrada et al. (2023)	Meta-analysis of two RCTs (n = 272; aged 5 to 18 years)	—	Liraglutide vs. placebo	No statistically significant between group differences in BW loss or BMI reduction.
Semaglutide 2.4 mg (Wegovy)				
Adults				
Davies et al. (2021)	RCT (n = 1,210)	Type 2 diabetes	Semaglutide plus lifestyle intervention vs. placebo plus lifestyle intervention	Significantly greater reductions in BW and WC with semaglutide at 68 weeks. Significantly higher proportions of semaglutide participants with ≥5%, ≥10%, and ≥15% weight loss.

Study	Study Design and Size	Comorbidity (if Any)	Intervention	Findings
Lincoff et al. (2023)	RCT (n = 17,604)	Preexisting cardiovascular disease but no diabetes	Semaglutide vs. placebo	Significantly greater reductions in percent BW and WC with semaglutide at 104 weeks.
Qin et al. (2024) (c)	Systematic review and meta-analysis of six RCTs (n = 3,962)	No diabetes	Semaglutide vs. placebo	Significantly greater reductions in percent BW, absolute BW, BMI, and WC with semaglutide treatment ranging between 20 to 104 weeks. Significantly higher proportions of semaglutide participants with ≥5%, ≥10%, ≥15%, and ≥20% weight loss.
Kosiborod et al. (2024)	RCT (n = 616)	Obesity-related heart failure and type 2 diabetes	Semaglutide plus baseline glucose-lowering medication vs. placebo plus baseline glucose-lowering medication	Significantly greater reductions in percent BW with semaglutide at 52 weeks.
McGowan et al. (2024)	RCT (n = 207)	Prediabetes	Semaglutide plus lifestyle intervention vs. placebo plus lifestyle intervention	Significantly greater reductions in percent BW and WC with semaglutide at 52 weeks. Significantly higher proportions of semaglutide participants with ≥5%, ≥10%, ≥15%, and ≥20% weight loss.
Shi et al. 2024)	Systematic review and meta-analysis	-	Semaglutide plus lifestyle modification vs. lifestyle modification alone	Significantly greater percent BW loss with semaglutide. Higher proportions of semaglutide participants with ≥5% and ≥10% weight loss.
Children and adolescents				
Weghuber et al. (2022)	RCT (n = 201; aged 12 to 18 years)	At least one weight-related coexisting condition if overweight	Semaglutide plus lifestyle modification vs. placebo plus lifestyle modification	Significantly greater BMI reduction with semaglutide at 68 weeks. Significantly higher proportions of semaglutide participants with ≥5% weight loss.
Kelly et al. (2023)	Post hoc analysis of Weghuber et al. (2022) RCT	At least one weight-related coexisting condition if overweight	Semaglutide plus lifestyle modification vs. placebo plus lifestyle modification	Significantly higher likelihood of being reclassified to a normal-weight or overweight BMI category with semaglutide. Significantly greater odds of achieving an improvement of at least one BMI category with semaglutide.

Study	Study Design and Size	Comorbidity (if Any)	Intervention	Findings
Tirzepatide (Zepbound)				
Adults				
Jastreboff et al. (2022)	RCT (n = 2,539)	No diabetes, and at least one weight-related coexisting condition if overweight	Tirzepatide (5 mg, 10 mg, and 15 mg) plus lifestyle counseling vs. placebo plus lifestyle counseling	Significantly greater reductions in percent BW with tirzepatide at 72 weeks. Significantly greater proportions of participants with ≥5% weight loss for all tirzepatide doses. Significantly greater proportions of participants with ≥20% weight loss with 10 mg and 15 mg doses compared to placebo.
Liu et al. (2024)	Systematic review and meta-analysis of three RCTs (n = 3,901)	No diabetes	Tirzepatide (5 mg, 10 mg, and 15 mg) plus lifestyle interventions vs. placebo plus lifestyle interventions	Significantly greater reductions in percent BW, BMI, and WC with tirzepatide for 72 or 88 weeks. Significantly higher proportions of tirzepatide participants with ≥5%, ≥10%, ≥15%, ≥20%, and ≥25% weight loss.
Children and adolescents				
	N/A. Not approved for use in children and adolescents.	N/A	N/A	N/A
Bupropion/naltrexone (Contrave)				
Adults				
Atlas et al. (2022)	Evidence review of four RCTs (n = 3,239)	With and without diabetes	Bupropion/naltrexone plus lifestyle intervention or IBT vs. placebo plus lifestyle intervention or IBT	Greater percent BW loss with bupropion/naltrexone at 1 year. Higher proportions of bupropion/naltrexone participants with ≥5% and ≥10% weight loss.
Shi et al. (2024)	Systematic review and meta-analysis	—	Bupropion/naltrexone plus lifestyle modification vs. lifestyle modification alone	Significantly greater percent BW loss with bupropion/naltrexone. Significantly higher proportions of bupropion/naltrexone participants with ≥5% and ≥10% weight loss.

Study	Study Design and Size	Comorbidity (if Any)	Intervention	Findings
Children and adolescents				
	N/A. Not approved for use in children and adolescents.	N/A	N/A	N/A
Orlistat (Xenical, Alli)				
Adults				
LeBlanc et al. (2018)	Systematic review of 11 trials (n = 10,899)	—	Orlistat (60 mg and 120 mg) plus behavior-based interventions vs. placebo plus behavior-based interventions	Significantly greater BW loss with orlistat 60 mg and 120 mg at 12 months. Orlistat participants regained weight at 18 to 48 months, however, both orlistat groups still lost significantly more weight since randomization compared to the placebo group. Participants regained their weight loss since randomization at 4 years, however, the orlistat 120 mg group still had significantly more weight loss than the placebo group.
Shi et al. (2024)	Systematic review and meta-analysis	-	Orlistat plus lifestyle modification vs. lifestyle modification alone	Significantly greater percent BW loss with orlistat. Significantly higher proportions of orlistat participants with ≥5% and ≥10% weight loss.
Orlistat (Xenical, Alli): children and adolescents				
O'Connor et al. (2017)	Systematic review of three studies (n = 799; aged 2 to 18 years)	—	Orlistat 120 mg plus counseling interventions vs. placebo plus counseling interventions	Greater BMI reduction with orlistat treatment between 6 to 12 months. However, between-group differences were only statistically significant for two of the studies.
Zhang et al. (2024) (d)	Meta-analysis of five RCTs (n = 696; under 18 years old)	—	Orlistat 120 mg vs. placebo	Significant BMI reduction in the short term with orlistat, but between group differences were not statistically significant after three months.

Study	Study Design and Size	Comorbidity (if Any)	Intervention	Findings
Phentermine/topiramate (Qsymia) for adults with overweight or obesity				
Gadde et al. (2011) (e)	RCT (n = 2,448)	Two or more hypertension-related comorbidities (hypertension, dyslipidemia, diabetes or prediabetes, or abdominal obesity)	Phentermine 7.5 mg/topiramate 46 mg vs. phentermine 15 mg/topiramate 92 mg vs. placebo, all with lifestyle intervention	Greater reductions in BW and WC with phentermine/topiramate compared to placebo, especially at the higher dose, at 56 weeks. Significantly higher proportions of phentermine/topiramate participants with ≥5% and ≥10% weight loss.
Allison et al. (2012) (e)	RCT (n = 1,026)	—	Phentermine 15 mg/topiramate 92 mg plus lifestyle intervention vs. placebo plus lifestyle intervention	Significantly greater reductions in BW and WC with phentermine/topiramate at 56 weeks. Significantly higher proportions of phentermine/topiramate participants with ≥5% and ≥10% weight loss.
Shi et al. (2024)	Systematic review and meta-analysis	—	Phentermine/topiramate plus lifestyle modification vs. lifestyle modification alone	Significantly greater percent BW loss with phentermine/topiramate. Higher proportions of phentermine/topiramate participants with ≥5% and ≥10% weight loss.
Phentermine/topiramate (Qsymia) for children and adolescents with overweight or obesity				
Hsia et al. (2020)	RCT (n = 42; aged 12 to 17 years)	—	Phentermine/topiramate plus intermittent diet and exercise counseling vs. placebo plus intermittent diet and exercise counseling	Significantly greater reductions in percent BW loss with phentermine 7.5 mg/topiramate 46 mg and phentermine 15 mg/topiramate 92 mg, and WC at the higher dose, at 56 days.
Kelly et al. (2022)	RCT (n = 223; aged 12 to 17 years)	—	Phentermine/topiramate plus lifestyle therapy vs. placebo plus lifestyle therapy	Significantly greater reductions in BW, BMI, and WC with phentermine 7.5 mg/topiramate 46 mg and phentermine 15 mg/topiramate 92 mg at 56 weeks.

Study	Study Design and Size	Comorbidity (if Any)	Intervention	Findings
Phentermine (Adipex-P, Lomaira)				
Adults				
Grunvald et al. (2022)	Meta-analysis of eight RCTs	Inadequate response to lifestyle interventions	Phentermine (at doses between 15 to 37.5 mg daily) plus lifestyle modification vs. lifestyle modification alone	Significantly greater percent BW loss with phentermine treatment for 12 to 28 weeks. Significantly higher proportions of phentermine participants with ≥5% and ≥10% weight loss.
Children and adolescents				
	N/A. No studies in children and adolescents.	N/A	N/A	N/A

Source: California Health Benefits Review Program, 2025.
Note: Liraglutide, semaglutide, and tirzepatide are GLP-1s. Bupropion/naltrexone, orlistat, phentermine/topiramate, and phentermine are non–GLP-1s.
(a) The Institute for Clinical and Economic Review (ICER) report by Atlas et al. (2022) presents findings from a systematic review and meta-analysis of 37 studies of four medications approved by the FDA for chronic weight management: liraglutide 3.0 mg, semaglutide 2.4 mg, bupropion/naltrexone, and phentermine/topiramate. Most of the evidence regarding the effectiveness of these medications comes from Phase III RCTs conducted prior to FDA approval. These RCTs compared the AOMs to placebo among patients who received a variety of lifestyle interventions (e.g., reduced-calorie diet, increased physical activity), and to placebo among patients who received IBT. As a result, the studies assessed the additive benefit of the medications in addition to supplemental interventions. Findings on semaglutide from the ICER report are not included in this report because a newer systematic review and meta-analysis of the same studies plus an additional RCT was conducted by Qin et al. in 2024.
(b) The systematic review and meta-analysis by Shi et al. (2024) compared different AOMs (including liraglutide 3.0 mg, semaglutide 2.4 mg, bupropion/naltrexone, and orlistat) plus lifestyle modification with lifestyle modification alone with or without placebo or an alternative active drug across 132 RCTs involving 48,209 adult participants with overweight or obesity. The follow-up duration of these studies was at least 1 year.
(c) Four of the RCTs employed a lifestyle intervention in addition to both semaglutide and placebo treatments, one RCT employed a low-calorie diet plus IBT, and one RCT did not mention employing any supplemental interventions.
(d) One RCT employed lifestyle modification and behavioral therapy in addition to both orlistat and placebo treatments, one RCT employed diet and lifestyle counseling, two RCTs employed lifestyle modification, and one RCT did not mention employing any supplemental interventions.
(e) The Allison et al. (2012) and Gadde et al. (2011) studies were included in the Atlas et al. (2022) ICER report. Findings are presented in the ICER report and in this CHBRP report separately because of the different patient populations involved.
Key: BMI = body mass index; BW = body weight; CHBRP = California Health Benefits Review Program; GLP-1 = glucagon-like peptide-1; WC = waist circumference.

Appendix C. Cost Impact Analysis: Data Sources, Caveats, and Assumptions

With the assistance of CHBRP's contracted actuarial firm, Milliman, Inc., the cost analysis presented in this report was prepared by the faculty and researchers connected to CHBRP's Task Force with expertise in health economics.[56] Information on the generally used data sources and estimation methods, as well as caveats and assumptions generally applicable to CHBRP's cost impacts analyses, are available on CHBRP's website.[57]

This appendix describes analysis-specific data sources, estimation methods, caveats, and assumptions used in preparing this cost impact analysis.

Analysis-Specific Data Sources

Baseline coverage of obesity for commercial enrollees was determined by a survey of the largest (by enrollment) providers of health insurance in California. Responses to this survey represented 86% of commercial enrollees with health insurance that can be subject to state benefit mandates. In addition, CalPERS was queried regarding related benefit coverage.

Health Cost Guidelines

Milliman's Health Cost Guidelines (HCGs) are a health care pricing tool used by actuaries in many of the major health plans in the United States. The guidelines provide a flexible but consistent basis for estimating health care costs for a wide variety of commercial health insurance plans. It is likely that these organizations use the HCGs, among other tools, to determine the initial premium impact of any new mandate. Thus, in addition to producing accurate estimates of the costs of a mandate, we believe the HCG-based values are also good estimates of the premium impact as estimated by the HMOs and insurance companies.

The highlights of the commercial HCGs include:

- Specific major medical, managed care, and prescription drug rating sections and guidance with step-by-step rating instructions.
- Other helpful analysis resources, such as inpatient length of stay distribution tables, Medicare Severity-Adjusted Diagnosis Related Group (MS-DRG) models, and supplementary sections addressing EHBs and mandated benefits, experience rating, and individual and small group rating considerations.
- Presentation of loosely and well-managed nationwide utilization and cost information by Milliman benefit-aligned service categories used throughout the Rating Structures – inpatient hospital services for both loosely and well-managed are also supported by DRG level utilization and cost benchmarks.
- Annual updates address emerging regulatory considerations such as health care reform and mental health parity requirements.
- Annually updated benefit descriptions used in the HCG service categories.
- Annually updated medical trend assumptions and considerations.
- Presentation of two sets of nationwide area factors to facilitate development of area-specific claim costs, including separate utilization and charge level factors by type of benefit, state and Metropolitan Statistical Area for first-dollar coverage, and composite factors by deductible amount.
- Claim Probability Distributions (CPDs) by type of coverage that contain distributions of claim severity patterns for unique combinations of benefits and member types (adult, child, composite member).

[56] CHBRP's authorizing statute requires that CHBRP use a certified actuary or "other person with relevant knowledge and expertise" to determine financial impact.
[57] See CHBRP's Cost Impact Analysis landing page; in particular, see *Cost Impact Analyses: Data Sources, Caveats, and Assumptions*.

- The Prescription Drug Rating Model (RXRM), an automated rating tool that provides a detailed analysis of prescription drug costs and benefits.

Consolidated Health Cost Guidelines Sources Database

Milliman maintains benchmarking and analytic databases that include health care claims data for nearly 60 million commercial lives and over 3 million lives of Medicaid managed care data. This dataset is routinely used to evaluate program impacts on cost and other outcomes.

Detailed Cost Notes Regarding Analysis-Specific Caveats and Assumptions

The analytic approach and key assumptions are determined by the subject matter and language of the bill being analyzed by CHBRP. As a result, analytic approaches may differ between topically similar analyses, and therefore the approach and findings may not be directly comparable. Prior CHBRP analyses of obesity treatment bills included changes in cost sharing parity and differences in prescription drug coverage. The analysis of SB 535 focuses on changes in cost due to changes in coverage only and does not assume that all plans will cover glucagon-like peptide-1 (GLP-1) receptor agonists. The methodology and results of SB 535 cost analysis are not comparable to results of prior obesity bills. The results of this analysis may be sensitive to the behavior of plan sponsors in response to the mandate, such as formulary placement and utilization management, especially related to GLP-1 receptor agonists.

For this analysis, CHBRP relied on Current Procedural Terminology (CPT®) codes to identify services related to SB 535.

Methodology and Assumptions for Baseline Benefit Coverage

The population subject to the mandated offering includes individuals covered by DMHC-regulated commercial insurance plans, CDI-regulated policies, and CalPERS plans subject to the requirements of the Knox-Keene Health Care Service Plan Act.

- DMHC-regulated Medi-Cal plans are exempt from this mandate.
- CHBRP conducted a survey of the largest (by enrollment) providers of health insurance in California to determine the percentage of enrollees that have pharmacy coverage.
- CHBRP conducted a survey of the largest (by enrollment) providers of health insurance in California to determine the percentage of the population subject to the mandate who currently receive coverage as mandated by SB 535.
- CHBRP separately polled coverage for obesity treatments.
- Responses to the survey of providers of health insurance represent 75% of commercial enrollees with health insurance that can be subject to state benefit mandates. For those providers who did not respond, CHBRP used survey responses from the SB 839 cost analysis.

CHBRP understands that CalPERS does not currently cover GLP-1s for weight loss across all segments. CHBRP assumed that CalPERS covers bariatric surgery, intensive behavioral therapy (IBT), and non-GLP-1 medications for weight loss based on a review of CalPERS' online formulary as of April 17, 2025.

CHBRP conducted a survey of the largest (by enrollment) providers of health insurance to determine the percentage of enrollees that are enrolled in plans by regulator, line of business, and deductible or metal tier.

Analysis Specific Data Sources

Glucagon-Like Peptide-1 Receptor Agonist Anti-Obesity Medication

CHBRP identified SAXENDA, WEGOVY, and ZEPBOUND as the glucagon-like peptide-1 receptor agonist (GLP-1) medications for weight loss which may be covered under SB 535.

CHBRP's typical data source does not contain information related to whether these medications are on a health plan's formulary. Therefore, the data used for this analysis is 2024 pharmacy claims data from Milliman's MyRxConsultant for a national self-insured employer that offers coverage these medications and has offered such coverage for several years. CHBRP used this data source as an estimate for unit cost and to set assumptions on baseline utilization:

- Estimated unit cost is consistent with a 30-day supply. Estimated unit cost is based upon pricing of direct-to-consumer programs for WEGOVY and ZEPBOUND offered by manufacturers. While these programs are not available through insurance, CHBRP assumes the insurers' negotiated net cost will be similar. Therefore, we estimated that the unit cost for GLP-1s would be $499 monthly.
- Estimated unit cost reflects pricing concessions from manufacturer rebates.
- CHBRP estimated that 7.5% of enrollees with obesity and full coverage by their health plan would use these medications.
- CHBRP estimates that 1.8% of individuals without coverage would self-pay for these medications. This information is based upon CHBRP's interpretation of the KFF Survey
- Estimated utilization is consistent with high observed trends for these medications and an assumption that supply chain issues are and remain fully resolved at baseline.

Other (Non–GLP-1) Anti-Obesity Medication

CHBRP identified ADIPEX-P, ALLI, CONTRAVE, IMCIVREE, LOMAIRA, PHENTERMINE, QSYMIA, SUPRENZA, and XENICAL as other medications for weight loss which may be covered under SB 535.

- Unit cost was estimated from 2024 pharmacy claims data from Milliman's MyRxConsultant and reduced to reflect pricing concessions from manufacturer rebates. CHBRP assumed that manufacturer rebates would be 38% of the cost of brand versions of these medications.
- CHBRP estimated that 2.0% of enrollees with obesity and full coverage by their health plan would use these medications. This is based upon comparing the observed relationship in utilization between GLP-1 medications and other medications for weight loss for commercially insured enrollees.

Bariatric Surgery

Unit cost and utilization is based upon commercially insured enrollees in California during 2023 from Milliman's Consolidated Health Research Databases.

CHBRP identified bariatric surgeries based upon the following CPT codes 43644, 43645, 43659, 43770, 43771, 43772, 43773, 43774, 43775, 43845, 43846, 43847, 43848, 43886, and 43887. CHBRP did not include any pre-operative office visits or other services which are likely to be immaterial.

To include all professional services (anesthesia, surgical, etc.) and all facility services, the cost of bariatric surgery includes all linked medical claims for the case using logic from Milliman's Health Cost Guidelines – "Grouper". CHBRP relied upon the Facility Case ID from the "Grouper" which ties together professional claim lines with a facility counterpart.

All bariatric surgeries were included in our analysis regardless of the patient's diagnoses. CHBRP is not currently aware of coverage for bariatric surgeries varying by whether the primary diagnosis is severe obesity or diabetes.

Intensive Behavioral Therapy

Utilization is based upon commercially insured enrollees in California during 2023 from Milliman's Consolidated Health Research Databases, with an assumption that 50% of IBT is reimbursed outside claims systems. To identify the number of enrollees within the database that utilized IBT services we took the following approach.

- CHBRP assumed that the following ICD10 diagnosis codes indicate obesity for the purposes of identifying relevant IBT: E66.0, E66.01, E66.09, E66.1, E66.2, E66.8, and E66.9.
- CHBRP assumed that services for the following CPT codes are specific to weight loss and obesity if the enrollee had a diagnosis for obesity during the year. These CPT codes include 97802, 97803, 97804, G0270, G0271, G0446, G0447, and G0473.
- CHBRP assumed that services for the following CPT codes are specific to weight loss and obesity if the same medical claim indicated a diagnosis for obesity. These CPT codes include 99078, 99080, 99401, and 99402.
- Finally, the number of enrollees was increased by a factor of two to account for the assumption that 50% of IBT is reimbursed outside claims systems.
- Unit cost is based upon publicly available information from the CDC, estimating that the cost per enrollee per year of a Diabetes Prevention Program (DPP) is $500. Note that DPP is the "gold standard" of IBT according to Dr. Diana Thiara and includes recommendations such as using a scale.

Methodology and Assumptions for Baseline Utilization and Cost

Baseline utilization is driven primarily based upon whether enrollees have coverage at baseline and CHBRP's analysis of claims data for enrollees who have full coverage at baseline. More information for each treatment is found above.

Table 14. Baseline Utilization of Obesity Treatments

	GLP-1 Medications	Other Medications	IBT	Bariatric Surgery
Enrollees with full coverage	7.5%	2.0%	0.5%	0.1%
Enrollees without coverage	1.8%	1.0%	0.0%	0.0%

Source: California Health Benefits Review Program, 2025.

Note: Table represents percentage of obese enrollees utilizing services at baseline.

Key: GLP = glucagon-like peptide; IBT = intensive behavioral therapy.

By market segment, utilization varies by the estimated prevalence of obesity. CHBRP's Cost Model uses assumptions consistent with the prevalence of obesity discussed in the *Background* section.

CHBRP assumed that self-pay utilization is 0% for IBT and bariatric surgery:

- In practice, some enrollees pay directly for the IBT program of their choice. However, relating to IBT, all carriers cover some form of these services.
- Relating to bariatric surgery, the relatively high cost of these services limits utilization for enrollees without coverage.

Methodology and Assumptions for Baseline Cost Sharing

- CHBRP assumed that cost sharing would be similar to average cost sharing (or average coinsurance) for a typical plan design within each metal level or deductible level.
- CHBRP assumed that cost sharing for IBT was $0 if indicated in the carrier survey at baseline.

Methodology and Assumptions for Postmandate Utilization

CHBRP conducted a carrier survey to determine the percentage of enrollees with fully compliant coverage at baseline. The survey was specific to each treatment.

Postmandate utilization remains unchanged for GLP-1 weight loss medications. Postmandate utilization for non–GLP-1 weight loss medications, bariatric surgery, and IBT are consistent with full coverage with the exception of plans that do not have outpatient prescription drug coverage. In those cases, non–GLP-1 utilization is assumed to remain self-paid.

Methodology and Assumptions for Postmandate Cost

CHBRP assumed the average cost per service would not change as a result of SB 535.

Methodology and Assumptions for Postmandate Cost Sharing

Postmandate, CHBRP assumed that all services are fully covered. CHBRP assumed that cost sharing would be similar to average cost sharing (or average coinsurance) for a typical plan design within each metal level or deductible level.

CHBRP assumed that cost sharing for IBT was $0 if indicated in the carrier survey at baseline.

Determining Public Demand for the Proposed Mandate

CHBRP reviews public demand for benefits by comparing the benefits provided by self-insured health plans or policies (which are not regulated by the DMHC or CDI and therefore not subject to state-level mandates) with the benefits that are provided by plans or policies that would be subject to the mandate.

Among publicly funded self-insured health insurance policies, the preferred provider organization (PPO) plans offered by CalPERS have the largest number of enrollees. The CalPERS PPOs currently provide benefit coverage similar to what is available through group health insurance plans and policies that would be subject to the mandate.

To further investigate public demand, CHBRP used the bill-specific coverage survey to ask plans and insurers who act as third-party administrators for (non-CalPERS) self-insured group health insurance programs whether the relevant benefit coverage differed from what is offered in group market plans or policies that would be subject to the mandate. The responses indicated that there were no substantive differences.

Second-Year Impacts on Benefit Coverage, Utilization, and Cost

CHBRP has considered whether continued implementation during the second year of the benefit coverage requirements of SB 535 would have a substantially different impact on utilization of either the tests, treatments, or services for which coverage was directly addressed, the utilization of any indirectly affected utilization, or both. CHBRP reviewed the literature and consulted content experts about the possibility of varied second-year impacts and determined the second year's impacts of SB 535 would be substantially the same as the impacts in the first year (see Table 9, Table 10, and Table 11). Minor changes to utilization and expenditures are due to population changes between the first year postmandate and the second year postmandate.

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References

Aaseth J, Ellefsen S, Alehagen U, Sundfør TM, Alexander J. Diets and drugs for weight loss and health in obesity — an update. *Biomedicine & Pharmacotherapy*. 2021;140:111789. doi:10.1016/j.biopha.2021.111789

Aboueid S, Bourgeault I, Giroux I. Nutrition care practices of primary care providers for weight management in multidisciplinary primary care settings in Ontario, Canada - a qualitative study. *BMC Family Practice*. 2018;19(1):69. doi:10.1186/s12875-018-0760-3

Alkhezi OS, Alahmed AA, Alfayez OM, Alzuman OA, Almutairi AR, Almohammed OA. Comparative effectiveness of glucagon-like peptide-1 receptor agonists for the management of obesity in adults without diabetes: a network meta-analysis of randomized clinical trials. *Obesity Reviews*. 2023;24(3):e13543. doi:10.1111/obr.1354

Allison DB, Gadde KM, Garvey WT, et al. Controlled-release phentermine/topiramate in severely obese adults: a randomized controlled trial (EQUIP). *Obesity (Silver Spring)*. 2012;20(2):330-342. doi:10.1038/oby.2011.330

Ard J, Fitch A, Fruh S, Herman L. Weight loss and maintenance related to the mechanism of action of glucagon-like peptide 1 receptor agonists. *Advances in Therapy*. 2021;38(6):2821-2839. doi:10.1007/s12325-021-01710-0

Atlas SJ, Kim K, Beinfeld M, et al. Medications for Obesity Management: Effectiveness and Value; Final Evidence Report. Institute for Clinical and Economic Review; October 20, 2022. Available at: https://icer.org/assessment/obesity-management-2022/. Accessed March 2025.

Cawley J, Biener A, Meyerhoefer C, et al. Direct medical costs of obesity in the United States and the most populous states. *Journal of Managed Care & Specialty Pharmacy*. 2021a;27(3):354-366. doi:10.18553/jmcp.2021.20410

Cawley J, Biener A, Meyerhoefer C, Ding Y, Zvenyach T, Smolarz BG, Ramasamy A. Job absenteeism costs of obesity in the United States: National and state-level estimates. Journal of Occupational and Environmental Medicine. 2021b;63(7):565-73.

Centers for Disease Control and Prevention (CDC). About Underlying Cause of Death, 2018-2023, Single Race. CDC Wonder. 2023a. Available at: http://wonder.cdc.gov/ucd-icd10-expanded.html. Accessed March 17, 2025.

Centers for Disease Control and Prevention (CDC). Adult BMI Categories. March 19, 2024a. Available at: https://www.cdc.gov/bmi/adult-calculator/bmi-categories.html. Accessed March 2025.

Centers for Disease Control and Prevention (CDC). Child and Teen BMI Categories. June 28, 2024b. Available at: https://www.cdc.gov/bmi/child-teen-calculator/bmi-categories.html. Accessed March 2025.

Centers for Disease Control and Prevention (CDC). High Obesity Program. Last updated January 13, 2025. Available at: https://www.cdc.gov/hop/php/about/index.html. Accessed on March 11, 2025.

Centers for Disease Control and Prevention (CDC). National Diabetes Prevention Program. 2023b. Available at: https://www.cdc.gov/diabetes/prevention/find-a-program.html. Accessed March 2025.

Centers for Disease Control and Prevention (CDC). Risk Factors for Obesity. March 18, 2024c. Available at: https://www.cdc.gov/obesity/risk-factors/risk-factors.html. Accessed March 2025.

Centers for Disease Control and Prevention (CDC). State Physical Activity and Nutrition. Last updated November 13, 2024d. Available at: https://www.cdc.gov/span/php/about/index.html. Accessed March 11, 2025.

Centers for Medicare & Medicaid Services (CMS). Medicaid Drug Rebate Program (MDRP). Last updated February 21, 2025a. Available at: https://www.medicaid.gov/medicaid/prescription-drugs/medicaid-drug-rebate-program/index.html. Accessed March 11, 2025.

Centers for Medicare & Medicaid Services (CMS). Medicaid Can Cover Obesity-Related Services, Helping Beneficiaries Reduce the Risk of Chronic Disease. 2025b. Available at: https://www.medicaid.gov/about-us/program-history/medicaid-50th-anniversary/entry/47693. Accessed March 11, 2025.

Ciardullo S, Morieri ML, Daniel G, et al. GLP1-GIP receptor co-agonists: a promising evolution in the treatment of type 2 diabetes. *Acta Diabetologica*. 2024;61(8):941-950. https://doi.org/10.1007/s00592-024-02300-6

Collins L, Costello RA. Glucagon-Like Peptide-1 Receptor Agonists. In: *StatPearls*. Treasure Island, FL: StatPearls Publishing; February 29, 2024.

Colquitt JL, Pickett K, Loveman E, Frampton GK. Surgery for weight loss in adults. *Cochrane Database of Systematic Reviews.* 2014;2014(8):CD003641. doi:10.1002/14651858.CD003641.pub4

Cornier M-A. A review of current guidelines for the treatment of obesity. *American Journal of Managed Care.* 2022;28(15 Suppl):S288-S296. doi:10.37765/ajmc.2022.89292

Cornejo-Estrada A, Nieto-Rodríguez C, León-Figueroa DA, Moreno-Ramos E, Cabanillas-Ramirez C, Barboza JJ. Efficacy of liraglutide in obesity in children and adolescents: systematic review and meta-analysis of randomized controlled trials. *Children (Basel, Switzerland)*. 2023;10(2):208. doi:10.3390/children10020208

Davies M, Færch L, Jeppesen OK, et al. Semaglutide 2.4 mg once a week in adults with overweight or obesity, and type 2 diabetes (STEP 2): a randomised, double-blind, double-dummy, placebo-controlled, phase 3 trial. *Lancet*. 2021;397(10278):971-984. doi:10.1016/S0140-6736(21)00213-0

Eisenberg D, Shikora SA, Aarts E, et al.2022 American Society of Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) indications for metabolic and bariatric surgery. *Obesity Surgery*. 2023;33(1);3-14. doi:10.1007/s11695-022-06332-1

Eyth E, Naik R. Hemoglobin A1C. In: *StatPearls*. Treasure Island, FL: StatPearls Publishing; March 13, 2023.

Fontaine KR, Redden DT, Wang C, Westfall AO, Allison DB. Years of life lost due to obesity. *JAMA*. 2003;289(2):187-193. doi:10.1001/jama.289.2.187

Gadde KM, Allison DB, Ryan DH, et al. Effects of low-dose, controlled-release, phentermine plus topiramate combination on weight and associated comorbidities in overweight and obese adults (CONQUER): a randomised, placebo-controlled, phase 3 trial. *Lancet*. 2011;377(9774):1341-1352. doi:10.1016/S0140-6736(11)60205-5

Gasoyan H, Pfoh ER, Schulte R, Sullivan E, Le P, Rothberg MB. Association of patient characteristics and insurance type with anti-obesity medications prescribing and fills. *Diabetes, Obesity & Metabolism*. 2024;26(5):1687-1696. doi:10.1111/dom.15473

Grover SA, Kaouache M, Rempel P, et al. Years of life lost and healthy life-years lost from diabetes and cardiovascular disease in overweight and obese people: a modelling study. *Lancet Diabetes & Endocrinology*. 2015;3(2):114-122. doi:10.1016/S2213-8587(14)70229-3

Grunvald E, Shah R, Hernaez R, et al., AGA Clinical Guidelines Committee. AGA clinical practice guideline on pharmacological interventions for adults with obesity. *Gastroenterology*. 2022;163(5):1198-1225. doi:10.1053/j.gastro.2022.08.045

Gudbergsen H, Overgaard A, Henriksen M, et al. Liraglutide after diet-induced weight loss for pain and weight control in knee osteoarthritis: a randomized controlled trial. *American Journal of Clinical Nutrition*. 2021;113(2):314-323. doi:10.1093/ajcn/nqaa328

Hampl SE, Hassink SG, Skinner AC, et al. Clinical practice guideline for the evaluation and treatment of children and adolescents with obesity. *Pediatrics*. 2023;151(2):e2022060640. doi:10.1542/peds.2022-060640

Hersch DE, Uy MJ, Ngaw SM, Loth KA. Primary care providers' perspectives on initiating childhood obesity conversations: a qualitative study. *Family Practice*. 2021;38(4):460-467. doi:10.1093/fampra/cmaa144

Hsia DS, Gosselin NH, Williams J, et al. A randomized, double-blind, placebo-controlled, pharmacokinetic and pharmacodynamic study of a fixed-dose combination of phentermine/topiramate in adolescents with obesity. *Diabetes, Obesity & Metabolism*. 2020;22(4):480-491. doi:10.1111/dom.13910

Järvholm K, Janson A, Peltonen M, et al. Metabolic and bariatric surgery versus intensive non-surgical treatment for adolescents with severe obesity (AMOS2): a multicentre, randomised, controlled trial in Sweden. *Lancet Child & Adolescent Health*. 2023;7(4):249-260. doi:10.1016/S2352-4642(22)00373-X

Jastreboff AM, Aronne LJ, Ahmad NN, et al. Tirzepatide once weekly for the treatment of obesity. *New England Journal of Medicine*. 2022;387(3):205-216. doi:10.1056/NEJMoa2206038

Jensen MD, Ryan DH, Apovian CM, et al. 2013 AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society. *Journal of the American College of Cardiology*, 2014;63(25 Part B):2985-3023. https://doi.org/10.1016/j.jacc.2013.11.004

Jobanputra R, Sargeant JA, Almaqhawi A, et al. The effects of weight-lowering pharmacotherapies on physical activity, function and fitness: a systematic review and meta-analysis of randomized controlled trials. *Obesity Reviews*. 2023;24(4):e13553. doi:10.1111/obr.13553

Jung M-H, Ihm S-H. Obesity-related hypertension and chronic kidney disease: from evaluation to management. *Kidney Research and Clinical Practice*. 2023;42(4):431-444. doi:10.23876/j.krcp.23.072

Kelly AS, Arslanian S, Hesse D, et al. Reducing BMI below the obesity threshold in adolescents treated with once-weekly subcutaneous semaglutide 2.4 mg. *Obesity (Silver Spring)*. 2023;31(8):2139-2149. doi:10.1002/oby.23808

Kelly AS, Bensignor MO, Hsia DS, et al. Phentermine/topiramate for the treatment of adolescent obesity. *NEJM Evidence*. 2022;1(6):10.1056/evidoa2200014. doi:10.1056/evidoa2200014.

Kosiborod MN, Abildstrøm SZ, Borlaug BA, et al. Semaglutide in patients with heart failure with preserved ejection fraction and obesity. *New England Journal of Medicine*. 2023;389(12):1069-1084. doi:10.1056/NEJMoa2306963

LeBlanc EL, Patnode CD, Webber EM, Redmond N, Rushkin M, O'Connor EA. *Behavioral and Pharmacotherapy Weight Loss Interventions to Prevent Obesity-Related Morbidity and Mortality in Adults: An Updated Systematic Review for the U.S. Preventive Services Task Force*. Evidence Synthesis, No. 168. Rockville, MD: Agency for Healthcare Research and Quality; 2018. Available at: https://www.ncbi.nlm.nih.gov/books/NBK532379/. Accessed March 17, 2025.

Levi J, Wang J, Venter F, Hill A. Estimated minimum prices and lowest available national prices for antiobesity medications: improving affordability and access to treatment. *Obesity*. 2023;31(5):1270-1279. doi:10.1002/oby.23725

Lincoff AM, Brown-Frandsen K, Colhoun HM, et al. Semaglutide and cardiovascular outcomes in obesity without diabetes. *New England Journal of Medicine*. 2023;389(24):2221-2232. doi:10.1056/NEJMoa2307563

Liu L, Shi H, Xie M, Sun Y, Nahata MC. Efficacy and safety of tirzepatide versus placebo in overweight or obese adults without diabetes: a systematic review and meta-analysis of randomized controlled trials. *International Journal of Clinical Pharmacy*. 2024;46(6):1268-1280. doi:10.1007/s11096-024-01779-x

Lu Y, Liu Y, Krumholz HM. Racial and ethnic disparities in financial barriers among overweight and obese adults eligible for semaglutide in the United States. *Journal of the American Heart Association*. 2022;11(19):e025545. doi:10.1161/JAHA.121.025545

McGough M, Lo J, Tevis D, Rae M, Cox C. How Many Adults With Private Health Insurance Could Use GLP-1 Drugs? Peterson-KFF Health System Tracker September 5, 2024. Available at: https://www.healthsystemtracker.org/brief/how-many-adults-with-private-health-insurance-could-use-glp-1-drugs. Accessed March, 2025.

McGowan BM, Bruun JM, Capehorn M, et al. Efficacy and safety of once-weekly semaglutide 2.4 mg versus placebo in people with obesity and prediabetes (STEP 10): a randomised, double-blind, placebo-controlled, multicentre phase 3 trial. *Lancet Diabetes & Endocrinology*. 2024;12(9):631-642. doi:10.1016/S2213-8587(24)00182-7

Mekonnen A, Vasilevski V, Chapman A, Naughton S, Yuen E, Willcox J, et al. Barriers and enablers to effective weight management for people living with overweight and obesity: a rapid scoping review. *Obesity Reviews*. 2024;26(3):e13858. doi:10.1111/obr.13858

Montero A, Sparks G, Presiado M, Hamel L. KFF Health Tracking Poll May 2024: The Public's Use and Views of GLP-1 Drugs. May 10, 2024. Available at: https://www.kff.org/health-costs/poll-finding/kff-health-tracking-poll-may-2024-the-publics-use-and-views-of-glp-1-drugs/. Accessed March, 2025.

National Cancer Institute (NCI). NCI Dictionary of Cancer Terms: Premature Death. 2019. Available at: www.cancer.gov/publications/dictionaries/cancer-terms/def/premature-death. Accessed March 2025.

National Conference of State Legislators (NCSL). 'Compounded" Weight-Loss Drugs Are a Growing Problem for State Regulators. July 15, 2024. Available at: https://www.ncsl.org/state-legislatures-news/details/compounded-weight-loss-drugs-are-a-growing-problem-for-state-regulators. Accessed March, 2025.

National Institutes of Health (NIH), Office of Research on Women's Health. Sex and Gender. 2019. Available at: https://orwh.od.nih.gov/sex-gender. Accessed March 2023.

National Institutes of Health (NIH). What Are Overweight and Obesity? 2022. Available at: https://www.nhlbi.nih.gov/health/overweight-and-obesity. Accessed March 2025.

National Institutes of Health (NIH). Health Risks of Overweight and Obesity. 2023. Available at: https://www.niddk.nih.gov/health-information/weight-management/adult-overweight-obesity/health-risks. Accessed March 2025.

Nichols GA, Hillier TA, Brown JB. Normal fasting plasma glucose and risk of type 2 diabetes diagnosis. *American Journal of Medicine*. 2008;121(6):519-524. doi:10.1016/j.amjmed.2008.02.026

O'Connor EA, Evans CV, Burda BU, Walsh ES, Eder M, Lozano P. Screening for obesity and intervention for weight management in children and adolescents: evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2017;317(23):2427-2444. doi:10.1001/jama.2017.0332

Park CH, Nam SJ, Choi HS, et al. Comparative efficacy of bariatric surgery in the treatment of morbid obesity and diabetes mellitus: a systematic review and network meta-analysis. *Obesity Surgery*. 2019;29(7):2180-2190. doi:10.1007/s11695-019-03831-6

Qin W, Yang J, Deng C, Ruan Q, Duan K. Efficacy and safety of semaglutide 2.4 mg for weight loss in overweight or obese adults without diabetes: an updated systematic review and meta-analysis including the 2-year STEP 5 trial. *Diabetes, Obesity & Metabolism*. 2024;26(3):911-923. doi:10.1111/dom.15386

Sandsdal RM, Juhl CR, Jensen SBK, et al. Combination of exercise and GLP-1 receptor agonist treatment reduces severity of metabolic syndrome, abdominal obesity, and inflammation: a randomized controlled trial. *Cardiovascular Diabetology*. 2023;22(1):41. doi:10.1186/s12933-023-01765-z

Schofield JD, Liu Y, Rao-Balakrishna P, Malik RA, Soran H. Diabetes dyslipidemia. *Diabetes Therapy*. 2016;7(2):203-219. doi:10.1007/s13300-016-0167-x

Seino Y, Fukushima M, Yabe D. GIP and GLP-1, the two incretin hormones: similarities and differences. *Journal of Diabetes Investigation.* 2010;1(1-2):8-23. doi:10.1111/j.2040-1124.2010.00022.x

Shi Q, Wang Y, Hao Q, et al. Pharmacotherapy for adults with overweight and obesity: a systematic review and network meta-analysis of randomised controlled trials. *Lancet*. 2024;403(10434):e21-e31. doi:10.1016/S0140-6736(24)00351-9

Silverii GA, Monami M, Gallo M, et al. Glucagon-like peptide-1 receptor agonists and risk of thyroid cancer: A systematic review and meta-analysis of randomized controlled trials. *Diabetes Obesity & Metabolism*. 2024;26(3):891-900. doi:10.1111/dom.15382

Stokes A, Collins JM, Grant BF, et al. Prevalence and determinants of engagement with obesity care in the United States. *Obesity (Silver Spring)*. 2018;26(5):814-818. doi:10.1002/oby.22173

Torbahn G, Brauchmann J, Axon E, et al. Surgery for the treatment of obesity in children and adolescents. *Cochrane Database of Systematic Reviews*. 2022;9(9):CD011740. doi:10.1002/14651858.CD011740.pub2

Tronieri JS, Wadden TA, Walsh O, et al. Effects of liraglutide on appetite, food preoccupation, and food liking: results of a randomized controlled trial. *International Journal of Obesity (London)*. 2020;44(2):353-361. doi:10.1038/s41366-019-0348-6.

U.S. Food and Drug Administration (FDA). Drugs@FDA. Available at: https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm. Accessed March 2025a.

U.S. Food and Drug Administration (FDA). FDA Clarifies Policies for Compounders as National GLP-1 Supply Begins to Stabilize. March 10, 2025b. Available at: https://www.fda.gov/drugs/drug-safety-and-availability/fda-clarifies-policies-compounders-national-glp-1-supply-begins-stabilize. Accessed March 2025.

U.S. Food and Drug Administration (FDA). Human Drug Compounding. December 18, 2024. Available at: https://www.fda.gov/drugs/guidance-compliance-regulatory-information/human-drug-compounding. Accessed March, 2025.

U.S. Office of Personnel Management (OPM). Healthcare and Insurance. Letter Number 2023-01. Subject: Prevention and Treatment of Obesity. January 18, 2023. Available at: https://www.opm.gov/healthcare-insurance/healthcare/carriers/2023/2023-01.pdf. Accessed March 11, 2025.

U.S. Preventive Services Task Force (USPSTF), Curry SJ, Krist AH, Owens DK, et al. Behavioral weight loss interventions to prevent obesity-related morbidity and mortality in adults: U.S. Preventive Services Task Force Recommendation Statement. *JAMA*. 2018;320(11):1163-1171. doi:10.1001/jama.2018.13022

Verrotti A, Scaparrotta A, Agostinelli S, Di Pillo S, Chiarelli F, Grosso S. Topiramate-induced weight loss: a review. *Epilepsy Research*. 2011;95(3):189-199. doi:10.1016/j.eplepsyres.2011.05.014

Visser M, Bouter LM, McQuillan GM, Wener MH, Harris TB. Elevated C-reactive protein levels in overweight and obese adults. *JAMA*. 1999;282(22):2131-2135. doi:10.1001/jama.282.22.2131

Wadden TA, Bailey TS, Billings LK, et al. Effect of subcutaneous semaglutide vs placebo as an adjunct to intensive behavioral therapy on body weight in adults with overweight or obesity: the STEP 3 randomized clinical trial. *JAMA*. 2021;325(14):1403-1413. doi:10.1001/jama.2021.1831

Wang L, Lin M, Yu J, et al. The impact of bariatric surgery versus non-surgical treatment on blood pressure: systematic review and meta-analysis. *Obesity Surgery*. 2021;31(11):4970-4984. doi:10.1007/s11695-021-05671-9

Wang YC, McPherson K, Marsh T, Gortmaker SL, Brown M. Health and economic burden of the projected obesity trends in the USA and the UK. *Lancet*. 2011;378:815-825. doi:10.1016/S0140-6736(11)60814-3

Washington TB, Johnson VR, Kendrick K, et al. Disparities in access and quality of obesity care. *Gastroenterology Clinics*. 2023;52(2):429-441. doi:10.1016/j.gtc.2023.02.003

Waters H, Graf M. America's Obesity Crisis: The Health and Economic Costs of Excess Weight. Santa Monica, CA: *Milken Institute*; 2018. Available at: https://milkeninstitute.org/sites/default/files/reports-pdf/Mi-Americas-Obesity-Crisis-WEB_2.pdf. Accessed on April 21, 2025.

Weghuber D, Barrett T, Barrientos-Pérez M, et al. Once-weekly semaglutide in adolescents with obesity. *New England Journal of Medicine*. 2022;387(24):2245-2257. doi:10.1056/NEJMoa2208601

Wilkinson L, Holst-Hansen T, Laursen PN, Rinnov AR, Batterham RL, Garvey WT. Effect of semaglutide 2.4 mg once weekly on 10-year type 2 diabetes risk in adults with overweight or obesity. *Obesity (Silver Spring)*. 2023;31(9):2249-2259. doi:10.1002/oby.23842

Williams E, Rudowitz R, Bell C. Medicaid Coverage of and Spending on GLP-1s. November 4, 2024. Available at: https://www.kff.org/medicaid/issue-brief/medicaid-coverage-of-and-spending-on-glp-1s/. Accessed March 11, 2025.

Wu T, Wong CKH, Lui DTW, et al. Bariatric surgery, novel glucose-lowering agents, and insulin for type 2 diabetes and obesity: Bayesian network meta-analysis of randomized controlled trials. *BJS Open*. 2023;7(4):zrad077. doi:10.1093/bjsopen/zrad077

Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. *Achieving Health Equity: A Guide for Health Care Organizations*. IHI White Paper. Cambridge, MA: Institute for Healthcare Improvement; 2016.

Zhang L, Meng C, Zhang F, et al. Effects of orlistat on body mass index and serum lipids in overweight and obese adolescents: a meta-analysis. *Journal of Pediatric Endocrinology & Metabolism*. 2024;38(2):95-101. doi:10.1515/jpem-2024-0429

Zheng Z, Zong Y, Ma Y, et al. Glucagon-like peptide-1 receptor: mechanisms and advances in therapy. *Signal Transduction and Targeted Therapy.* 2024;9:234. https://doi.org/10.1038/s41392-024-01931-z

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CHBRP assumes full responsibility for the report and the accuracy of its contents. All CHBRP bill analyses and other publications are available at chbrp.org.

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Please direct any questions concerning this document to: California Health Benefits Review Program, MC 3116, Berkeley, CA 94720-3116; info@chbrp.org; or chbrp.org.

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