

Coverage for obesity prevention and treatment: analysis of state employee health plans and use of benefits

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Abstract

Objective: Using data from 2017, the authors have previously examined the coverage of obesity-related services in state employee health plans since 2009 and found improvements in coverage for obesity-related treatments. This study repeated the collection of similar data for 2021 and explored whether coverage had continued to increase or decline.

Methods: Data on obesity benefits for state employees were obtained from publicly available documents from relevant state websites. Source documents were reviewed for language that would indicate the availability of coverage for nutritional counseling, pharmacotherapy, and bariatric surgery. Use data were collected when available, but availability was limited.

Results: Coverage for some treatments of obesity continued to trend upward, as was the case between 2009 and 2017, but coverage for pharmacotherapy declined from 2017 to 2021. Use data were received from only eight states; analysis of these data indicated underuse of obesity benefits by plan enrollees compared with each state's rate of obesity.

Conclusions: Despite promising new therapies, states in 2021 were less likely to provide coverage for antiobesity medications. Additionally, limited use data suggested that few eligible individuals may be receiving these services. In conclusion, state employee health plans are currently inadequate given the prevalence, severity, and costs of obesity.

INTRODUCTION

Obesity is a complex, chronic, relapsing disease in which abnormal or excessive accumulation of body fat impairs health. Adult obesity rates have more than doubled since the 1980s; in the United States today, obesity affects more than 42% of adults and 19% of youth [1, 2]. The disease of obesity and its related complications are major drivers of rising health care costs [3, 4], diminished health-related quality of life, and the decline in US life expectancy [5].

Health professionals frequently cite limited reimbursement for obesity-related services as a barrier to delivering appropriate care for

persons with obesity [6]. Inadequate provider training, restrictive benefit designs, and weight bias and stigma all contribute to the low use of available treatments. Estimates suggest that only 5% of persons with obesity use obesity-related outpatient services [7], 3% use antiobesity drug therapy [8, 9], and 1% of those eligible for bariatric surgery use surgical treatments [10]. One study found that 25% of patients seeking bariatric surgery were denied more than three times before obtaining approval, and by then, 60% had worsening health problems [11].

Although obesity imposes an enormous burden on the US health care system and the economy, the present landscape of coverage for obesity care is piecemeal. The fragmented US health care system

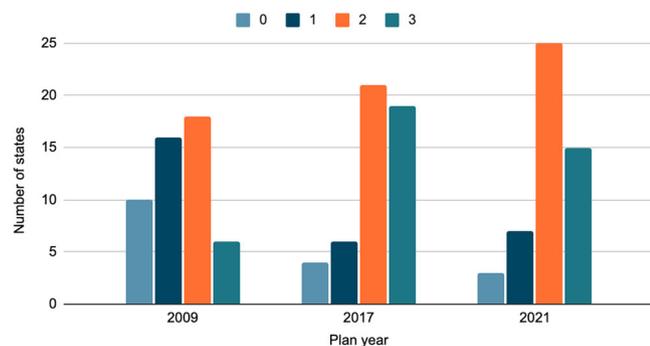


FIGURE 1 Number of covered obesity treatment modalities [Color figure can be viewed at wileyonlinelibrary.com]

makes it difficult to know what care is available and how much it costs (Figure 1).

Without guidance on how to operationalize evidence-based behavioral, nutritional, pharmacological, and surgical obesity treatments as health benefits, health care plans have taken vastly different approaches in determining what, and how, obesity treatment services are covered for their members. To complicate matters, information about what obesity treatment services are covered and for whom, where care should be delivered, which providers are eligible to deliver care, and how obesity care should be delivered (e.g., amount, scope, duration) is spread across multiple administrative plan documents and sources.

To improve the treatment and management of obesity, coverage must be expanded. This process begins with a determination of the services that are currently covered and whether patients are using these treatments. In 2017, the strategies to overcome and prevent Obesity Alliance conducted a state-by-state analysis of Medicaid and state employee health plan coverage for obesity prevention and treatment [12]. These analyses revealed a wide range of benefits and significant barriers to care with unreasonable preconditions. This research has been widely used to advocate for better access services across the states.

Our goal was to update the research conducted in 2017 by collecting new data on state employee health plan coverage of obesity benefits in 2020/2021.

METHODS

Data on obesity benefits provided by state employee health plans were obtained by reviewing publicly available documents. The methodology was the same as that conducted in 2017 by Jannah et al. [12], and it included an extensive review of websites for state human resources departments, state pension boards, and health plans. Specific sources included subscriber handbooks, plan summaries, and formularies. Not all source documents were publicly available in each state. Baseline data for the 2016 to 2017 plan year were collected between March and August 2017. Follow-up data for the 2020 to 2021 plan year were collected between February and April 2021.

Study Importance

What is already known?

- Between 2009 and 2017, there was an upward trend in state coverage of nutritional counseling, pharmacotherapy, and bariatric surgery for obesity.
- In 2020, the Behavioral Risk Factor Surveillance System reported that the prevalence of obesity among adults was 32.1%.
- One determinant of access to health care is the availability of coverage through a health insurance policy. Without coverage through an employer-based health insurance policy, treatment for obesity is often unaffordable.

What does this study add?

- This paper highlights the trends in state employee health insurance coverage between 2009, 2017, and 2021. Between 2009 and 2017, there was a positive trend in coverage of obesity-related treatments, but between 2017 and 2021, coverage plateaued for nutritional counseling and bariatric surgery and declined for pharmacotherapy.
- Although documentation was limited, benefits available to state health plan enrollees appear dramatically underused.

How might these results change the direction of research or the focus of clinical practice?

- Further research is needed to understand the scope of the underuse of benefits when they are available. Ideally, data from all 50 states would fully characterize the extent to which benefits for obesity-related services are available to state employees and the extent to which they are used.
- Clinically, this research will empower providers and labor advocates to renegotiate contracts with insurers to improve use of benefits and to expand the availability of care for obesity.

Source documents were reviewed for coverage language and payment policies that would indicate the availability of coverage for nutritional counseling, pharmacotherapy, and bariatric surgery. Search terms used for plan documents other than drug formularies included, but were not limited to, “anorexia,” “anorexiant,” “anti-obesity,” “appetite suppressant,” “bariatric,” “counseling,” “diet,” “drug,” “loss,” “metabolism,” “nutrition,” “obesity,” “reduction,” and “weight.” Drug formularies were reviewed for coverage of US Food and Drug

TABLE 1 Summary of coding criteria for coverage determination

Coverage code	Coding criteria from evidentiary review
Covered	Evidentiary review indicated possible coverage of treatment for nonpregnant adults (aged 21+) with obesity, regardless of specified restrictions (e.g., only some plans, annual cap, high cost-sharing). Does not include possible coverage for treatment only in the presence of comorbid condition (e.g., heart disease, diabetes). Does include contradictory guidance (e.g., presence of inclusive language and exclusionary language).
Not covered	Evidentiary review indicated noncoverage of treatment for nonpregnant adults (21+) with obesity.
Undetermined	Evidentiary review indicated absent guidance on appropriate provisions of treatment for nonpregnant adults (21+).

Administration (FDA)-approved medications indicated for chronic weight management (≥ 3 months): orlistat, lorcaserin, phentermine-topiramate, naltrexone-bupropion, and liraglutide; and short-term weight management (≤ 3 months): benzphetamine, diethylpropion, phendimetrazine, and phentermine. If the search terms failed to identify coverage, documents were reviewed for any guidance on obesity assessment and treatment, restrictions or limits on covered treatments for obesity, and/or explicit exclusions of obesity-related treatments.

Results from the evidentiary review were used to code whether each state provided 1) evidence of coverage of obesity, 2) inconclusive evidence of coverage, or 3) evidence of exclusion for each service. When coverage was indicated for a specific service only for women, children, or patients with diabetes, the services were coded as “not covered,” unless evidence of coverage for the general adult population was specified elsewhere in the plan materials. Pharmacotherapy was coded as “covered” for states that indicated reimbursement for one or more obesity drugs by inclusion in their formulary or coverage criteria for pharmacotherapy specified in other plan documents. If a drug was available only after prior authorization, drugs were considered covered. When a plan included evidence of both coverage and exclusion for a category, the category was considered covered.

Data collected in this review were compared with data collected during the 2016 to 2017 plan year review to assess increased or reduced coverage in these specific categories. A state’s employee health insurance plan was determined to have increased in a category if the plan documents showed movement from “undetermined” or “not covered” to “covered.” A plan was determined to have reduced coverage if evidence showed movement from “covered” to “undetermined” or “not covered.”

Use data were collected from state insurance agencies, treasuries, public employee benefits trusts, or other state entities that held claims data for the state employee health plans between January and May

2021. In many cases, data were held by a third-party plan carrier or administrator and were beyond the reach of these state entities. Data request letters were filed with each state through the state’s freedom of information statute or its equivalent. These letters included an explanation of the purposes of this study and the uses for the data. Attached to the letters was a chart, which asked that the plan provide data for the number of individuals who received treatment billed under each specific Current Procedural Terminology/Healthcare Common Procedure Coding System (CPT/HCPCS) code or received a drug with a specific National Drug Code (NDC) and the total number of times each CPT/HCPCS code or NDC was billed to the plan during the plan year 2019 (PY2019). States were also asked to provide the number of enrollees in the plans for which they provided data and the time period of the data. The time period for the data was used to define what a state considered “plan year 2019” because states varied in starting their fiscal or insurance plan year. Supporting Information Table S1 includes the HCPCS, CPT, and NDC that we used to identify obesity-related services.

Responses from states to requests for use data varied. Many states did not respond or they asserted that the data sought were not subject to public disclosure. Several states responded that they did not possess the data and that we should attempt to contact the plan carrier. Plan carriers were not forthcoming when requests were made to them. States that provided data were separated into two categories: complete and incomplete data sets. Complete data sets included data for CPT/HCPCS codes and/or data for NDCs and the number of plan enrollees. Incomplete data sets lacked one or more of these attributes. By the end of the collection period, we had received eight complete data sets and seven incomplete data sets.

Each state’s obesity data were compiled by the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS provides the only state-based assessment of the prevalence of obesity. However, because the BRFSS relies on self-reported heights and weights, the true prevalence of obesity is underestimated. Complete data sets were then analyzed by dividing the number of individuals who received services in each treatment category by the number of plan enrollees. This percentage was compared with the rate of obesity in the state to determine whether there was significant use of obesity services by the at-risk population. We are not aware of any published studies that have compared the prevalence of obesity in state employee health plans with the prevalence of obesity collected by the BRFSS. Therefore, we assumed that the rate of obesity among state employees enrolled in the state’s health insurance plan was similar to the overall rate of obesity in the state (Table 1).

RESULTS

Restricted coverage

Coverage for adults with obesity who were covered by state employee health insurance plans has decreased since 2017 but has

trended upward since 2009. Between 2009 and 2017, state employee health plans increased coverage for nutritional counseling by 75% (from 24 to 42 states). Between 2017 and 2021, state employee health plans indicated no net change for nutritional counseling, and the number of states indicating coverage remained at 42. Coverage of pharmacotherapy increased by 64% between 2009 and 2017 (from 14 to 23 states), but between 2017 and 2021, coverage decreased by 35% (from 23 to 16 states). Coverage for bariatric surgery between 2009 and 2017 increased by 23% (from 35 to 43 states). One state added bariatric surgery between 2017 and 2021, bringing the number of states that indicated coverage for bariatric surgery to 44. The net changes between 2009 and 2021 are indicated in Table 2.

In 2021, states were far less likely to provide coverage for pharmacotherapy than they were in 2017; two states added coverage and nine states dropped coverage. Additionally, three states reduced coverage for nutritional counseling whereas three states increased coverage. Bariatric surgery was the only treatment category with an overall positive increase in coverage.

Use data

The states that were most likely to provide data were also likely to indicate coverage for two or more of the treatment categories assessed in the evidence of coverage review. Analysis of the complete

data sets, shown in Supporting Information Table S2, indicated a dramatically lower percentage of plan enrollees who received services for nutritional counseling, pharmacotherapy, and bariatric surgery when compared with the number of enrollees who received screening and preventive services.

The Texas Employee Retirement System was one of the state agencies that provided a complete data set for analysis. Texas reported a plan enrollment of 429,592 people in PY2019. The rate of self-reported obesity in adults in 2020, as reported by the CDC, was 35.8% [13]. Texas reported that, in PY2019, 146,382 patients had claims billed for preventive services, indicating that 34.07% of enrollees received some type of obesity preventive screening visit with their doctor. There was a sharp decline when it came to higher levels of care. Texas reported that only 2,526 patients received some type of nutritional consultation (0.59% of plan enrollees), 1,173 patients received disease management consultation (0.27% of plan enrollees), 3,866 patients received behavioral consultations and therapy (0.90% of plan enrollees), and 39 patients received bariatric surgery (0.01% of plan enrollees). In addition to medical claims, Texas reported only five prescription drug claims in PY2019 (Table 3).

Texas was not the only state to report a sharp decrease in preventive services and other forms of care for obesity. All states that submitted complete data sets reported similar results. When compared with the rate of obesity in the state, the percentage of enrollees

TABLE 2 Changes in evidence of coverage for obesity treatment services, PY09/10-PY20/21

Treatment modality	Coverage indicated			Change in evidence of coverage	
	2009	2017	2021	Positive change ^a	Negative change ^b
Nutritional counseling	24	42	42	Nebraska, South Dakota, Texas	New Mexico, Oklahoma, Vermont
Pharmacotherapy	14	23	16	New Jersey, Texas	California, Connecticut, Hawaii, Illinois, Missouri, North Dakota, Oregon, Rhode Island, Washington
Bariatric surgery	35	43	44	Wyoming	

Abbreviation: PY, plan year.

^aPositive change states coded as “undetermined” or “not covered” in 2017 and “covered” in 2021; bolded text indicates change from “not covered” in 2017 to “covered” in 2021.

^bNegative change states coded as “covered” in 2017 and “undetermined” or “not covered” in 2021; bolded text indicates change from “covered” in 2017 to “not covered” in 2021.

TABLE 3 Texas Employee Retirement System use data, Plan Year 2019

Service area	Patients (N = 429,592 plan enrollees)	Claims	Utilization rate (2020 TX Obesity rate = 35.8%)
Preventive services	146,382	154,756	34.07%
Nutritional consultation	2,526	5,210	0.59%
Disease management and education	1,173	6,387	0.27%
Behavioral consultation and therapy	3,866	5,003	0.90%
Bariatric surgery	39	63	0.01%
Generic antiobesity medication	5	5	0.00%
Branded antiobesity medication	0	0	0.00%

receiving services indicated an even larger gap between care received and the at-risk population. In the eight states that submitted complete data sets, the mean of self-reported obesity was 32%. The mean percentage of plan enrollees receiving preventive and screening services was 28%. These findings contrast with 1.2% for nutritional counseling, 1% for pharmacotherapy, and 0.09% for bariatric surgery.

DISCUSSION

This study builds on the work of Jannah et al. to document the trends in state employee health plans in their reported coverage of treatments for obesity. Like the study by Jannah et al., we evaluated publicly available documents relating to health insurance coverage for state employees and their dependents. The comparative analyses conducted by Jannah et al. reported significant improvement in coverage for obesity-related services in state employee health plans between 2009 and 2017. Our analysis attempted to determine whether the trend continued to show improvement or whether there had been reduction in the availability of treatments for obesity. We found no overall change in coverage for nutritional counseling, a slight positive change for bariatric surgery coverage, and a sharp decrease in coverage for pharmacotherapy.

Despite the increasing effectiveness of antiobesity medications (AOMs), the decline in coverage in state plans limits obesity therapy to counseling and bariatric surgery. It is unclear whether the limited coverage of AOMs reflect a lack of recognition of obesity as a disease, concerns about the safety of AOMs, a lack of recognition of the effectiveness of AOMs, or the overall costs of the AOMs. Nonetheless, the absence of approval of AOMs in state plans imposes a severe restriction on therapeutic choices for the treatment of obesity for employees and their dependents.

In addition to the investigation of the trends in coverage, we also examined the use of these benefits. At the end of the data gathering period, we had received complete data sets for eight states. When compared with BRFSS rates of obesity in each state, we saw a drastic underuse of obesity benefits by plan enrollees. Although the number of individuals receiving preventive and screening services tracked fairly consistently with the state's rate of obesity, the state's use of higher-level services such as nutritional counseling, behavioral therapy, disease management education, pharmacotherapy, and bariatric surgery was considerably lower. Although the lower rates of use of these services does not likely reflect a significantly lower prevalence of obesity among state employees, no data were available to compare the rates of obesity in state employees with the rates measured in the BRFSS.

Based on the analysis of the use data, indications of coverage in plan documents are not matched by rates of use. There are a number of possible reasons these services are underused. First, patients may not be aware that their insurance plan provides coverage for obesity treatments. Lack of awareness may be caused by vague language in the plan documents that does not clearly indicate that coverage is available. It may also be that enrollees are not properly informed of where to find coverage information. Second, the plan may indicate coverage for a service but have prohibitive limitations in place. These

limitations include "fail first" requirements for drug therapy, criteria for surgery that are difficult to meet, caps on the number of times a service may be received by an individual, either annually or in the patient's lifetime, or prohibitively high cost-sharing obligations. Third, providers may not be aware that the plan covers services beyond prevention and screening. If providers are not aware of what a patient's insurance will cover, they may be less likely to suggest treatment services to their patient. Finally, carriers may indicate coverage for services in publicly available documents but have proprietary payment formulas that restrict providers' ability to bill for services provided. A provider is very unlikely to engage in a course of treatment with a patient when the provider knows that the insurer is unlikely to pay or that the course of treatment will be financially burdensome to the patient. Carriers that engage in these restrictive payment practices disincentivize providers from addressing the risks and treatment options for obesity with their patients.

Lack of use data was one of the limitations previously identified by Jannah et al.'s analyses. Our attempts to collect these data were of limited success. Another limitation to our analysis is that it relied on a review of plan documents available to the public. The language in these documents was often vague. As a consequence, our study methods may have been less sensitive for identifying coverage for obesity-related treatments. Additional information on the availability of obesity services may have been included in documents not available to the public.

States that were most likely to report use data were those that also provided coverage for most obesity-related services. This discrepancy represents a selection bias on the part of the states. Additionally, some states provided only partial data sets and were excluded from final review for this reason. A larger sample size, preferably a complete data set from each state, is needed to further evaluate the connection between plan language indicating coverage and use by enrollees. Future efforts to obtain use data should consider including a request for claims billed with a diagnosis code specifically related to obesity.

In conclusion, the paucity and diversity of state health employee coverage are unacceptable given the prevalence, severity, and costs of obesity. Furthermore, the low use of benefits when they are available emphasizes the need to publicize these benefits to providers and patients and to increase the demand for comprehensive obesity treatment services. A critical question is whether the limitations imposed by state employee health plans reflects the biased view that obesity is a product of poor choices rather than a disease. 

CONFLICT OF INTEREST

The authors report funding for the STOP Obesity Alliance from Novo Nordisk A/S, WW (formerly Weight Watchers), Pfizer, Curax, and Seca, outside the submitted work. In addition, William H. Dietz reports consulting fees from the Roundtable on Obesity Solutions of the National Academy of Medicine, outside the submitted work.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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