Healthcare resource utilization of adult patients with obesity before vs. after GLP-1 treatment in the United States elective outpatient setting

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Patients with obesity are commonly prescribed glucagon-like peptide-1 (GLP-1) agonists for weight loss.

We aimed to characterized patients with obesity receiving GLP-1 treatment in an elective outpatient setting and compared their healthcare resource utilization (HCRU) before vs. after the start of GLP-1 treatment in the United States.

Methods

Study Design

Retrospective Cohort Study

Data Source

Premier Healthcare Database (PHD), a large geographically diverse hospital-based inpatient and outpatient discharge database

Study Period

- January 1, 2019, and December 31, 2023

Study Population

Inclusion criteria

- Age ≥ 18 years old
- Received GLP-1 during an outpatient encounter between January 1, 2020, and December 31, 2022
- Had diagnosis of obesity (BMI ≥ 30) on or within 12 months prior to index encounter*

Exclusion criteria

- Had diagnosis of diabetes
- Received urgent or emergent care at index encounter

**Index encounter: Earliest encounter with evidence of GLP-1 use in the accrual period*

Outcomes

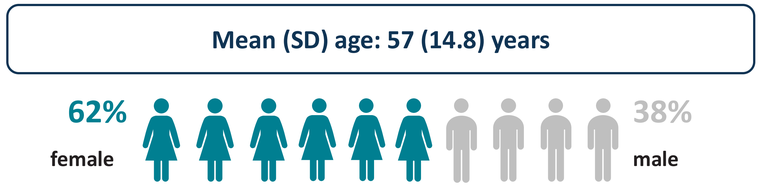
- Number of outpatient visits
- Number of inpatient hospitalizations
- Length of stay (LOS)
- Healthcare cost

Statistical Analysis

- Outcomes were compared between 12-month prior to vs. 12-month after a 3-month gap from the start of GLP-1 treatment
- Repeated-measure logistic regressions and paired t-tests were used.
- GLP-1 costs were included in total costs
- Costs were adjusted to 2023 Consumer Price Index (CPI).

Baseline Characteristics

176,586 Patients



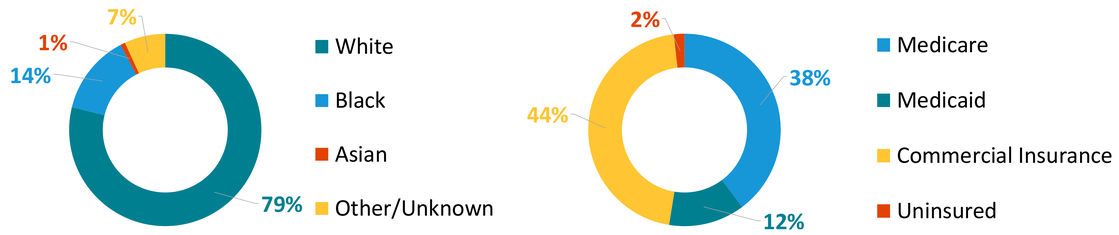


Figure 1. Mean number of outpatient visits and hospitalizations, and mean LOS 12-month before vs. 12-month after GLP-1 treatment initiation

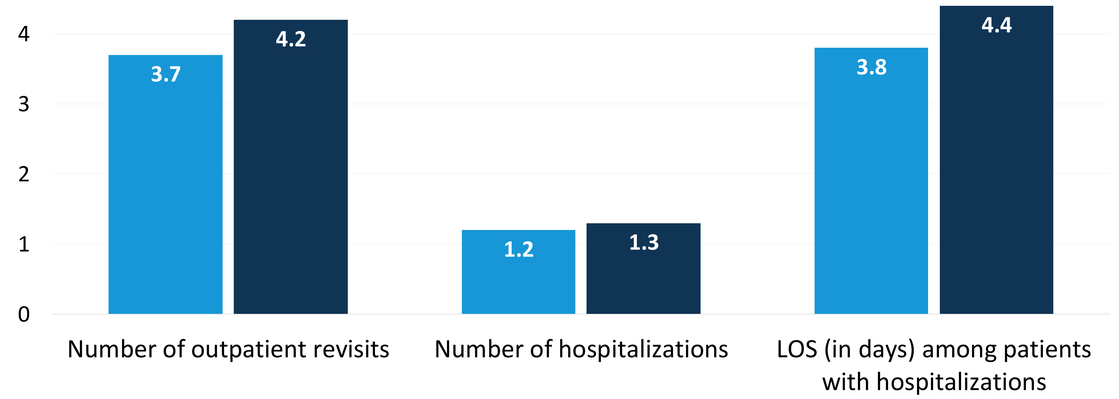
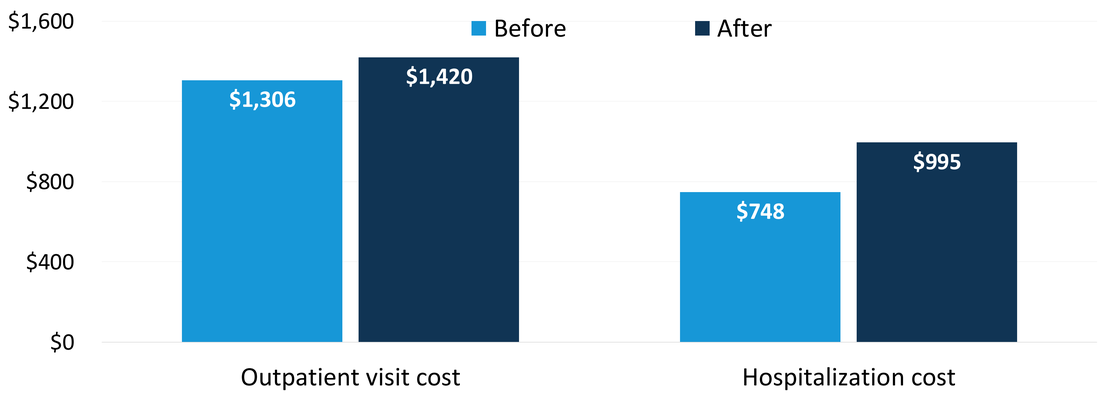


Figure 2. Mean total healthcare cost (in 2023 USD) 12-month before vs. 12-month after GLP-1 treatment initiation



Compared to 12-month prior, during 12-month post GLP-1 treatment initiation, patients were:

✓ **Less likely to have any outpatient visits** (43% vs. 60%, p < 0.001).

✓ **Small increase of $114 in annual outpatient visit cost** on average (p < 0.001).

✓ **Slightly more likely to have any hospitalizations** (6.6% vs. 6.2%, p < 0.001)

✓ **More likely to have small increase in mean annual hospitalization cost** of $247 (p < 0.001)

✓ **Slightly longer hospital length-of-stay** (mean difference = 0.47 days, p < 0.001)

Conclusion

After the start of GLP-1 treatment, patients were less likely to have outpatient visits, but number of hospitalizations, costs, and LOS slightly increased.

Investigating cost-effectiveness and net health benefits of GLP-1 treatment in selected populations is warranted.

Future research questions:

- To what extent the health benefits of GLP-1 treatment outweigh the observed increase in healthcare utilization?
- How does healthcare utilization of patients receiving GLP-1 treatment differ in terms of demographic and clinical characteristics?

References

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Disclosures

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