The Pen That Makes You Leaner: GLP-1 Prescription Trends for Weight Loss in the US

Markan R, Ganguly R, Mishra R, Singla R, Vishal, Bhagat A, Zaheer T, Verma V, Roy A, Kukreja I, Nayyar A, Sachdev A, Seligman M, Brooks L, Goyal R

Background

- Glucagon-like peptide-1 receptor agonists (GLP-1RAs) are widely used in the management of Type-2 Diabetes and Obesity due to their weight loss potential.[1]
- Evaluating real-world prescribing patterns can provide valuable insights into how these therapies are utilized across diverse patient populations.

Objective

This study aimed to examine the real-world trends in the initiation and refill patterns of GLP-1RAs for weight loss across demographics in the US.

Methodology

- This retrospective cohort study used the Optum® Market Clarity database to identify patients receiving GLP-1RAs for weight loss between January 2017 and June 2024 (**Figure 1**).

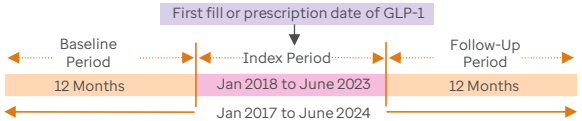

Figure 1. Study design and timeline

- The identification period spanned from January 2018 to June 2023, and the index event was defined as the first GLP-1RAs prescription or fill during this period.
- Inclusion criteria: Patients aged 18-64 years, with ≥1 diagnosis of obesity or overweight using ICD-10 codes and a BMI ≥30, and continuous enrollment for at least one year pre- and post-index date were included.
- Exclusion criteria: Patients diagnosed with pre-diabetes, diabetes, impaired glucose levels, cancer, pregnancy, or those who underwent bariatric surgery during the pre-index year were excluded.

Results

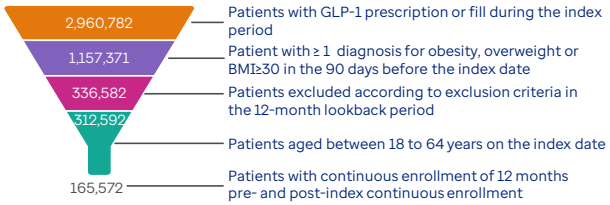

Figure 2. Patient selection

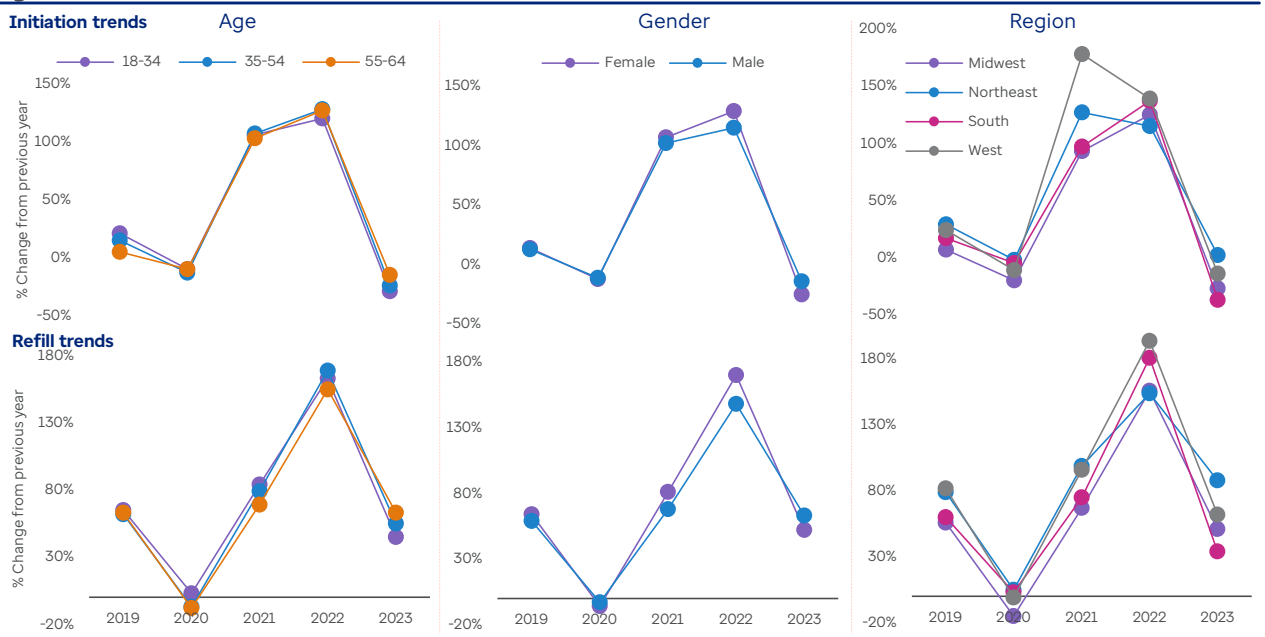

Figure 3. GLP-1 yearly prescription trends

- A total of 2,960,782 patients with GLP-1RA prescriptions were identified between 2018 and 2023 (**Figure 2**).
- Overall, 165,572 patients were included in the study and were further analyzed for initiations (IN) and refills (RE).
- Both initiation and refill volumes exhibited a stable year-on-year increase between 2020 and 2022 across age groups, genders, and regions.
- A reduction in both prescription and refill rates was observed between 2019 and 2020, which can be attributed to the COVID-19 pandemic. Similarly, a dip from 2022 to 2023 was observed consistently across demographic parameters due to an unexpected shortage of GLP-1RAs during late 2022 (**Figure 3**).[2]
- The IN and RE patterns were similar across age groups. Compared to IN, the RE exhibited a linear increase from 2020 to 2022. Females accounted for relatively higher prescription rates (**Figure 3**) than males, reaching a maximum in the year 2022 for both IN (129% vs. 115%) and RE (170% vs. 148%), respectively.
- Geographically, patients from all regions exhibited similar IN and RE trends, with the West exhibiting maximum IN (178%) and RE (194%) in the years 2021 and 2022, respectively (**Figure 3**).

Conclusions

The initiation and refill rates of GLP-1RAs have increased significantly over time. These findings highlight the growing role of GLP-1RAs in weight management and the need for equitable access. Future research should explore the drivers of prescription variations and address demographic disparities in GLP-1RA access.

References: 1. Ma, Xiaoxuan, et al. GLP-1 receptor agonists (GLP-1RAs): cardiovascular actions and therapeutic potential. *Int. J. Bio. Sci.* 17.8 (2021): 2050.
2. Whitley, Heather P., et al. Special report: potential strategies for addressing GLP-1 and dual GLP-1/GIP receptor agonist shortages. Clinical Diabetes 41.3 (2023): 467-473.

Optum