Trends in GLP-1 receptor agonist dispensing among US patients without type 2 diabetes using real-world data

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Background

- Obesity is a long-term disease stemming from several biological (genetics, hormonal), socioeconomic, and structural factors.
- Obesity also leads to the development of hypertension (HT), type 2 diabetes (T2D), dyslipidemia, stroke, coronary heart disease, gout, nonalcoholic fatty liver disease, and various cancers.
- Recently, glucacon-like peptide 1 (GLP-1) agonists originally developed for T2D management, have been approved by the regulators for obesity/weight loss applications among those without diabetes.
- These novel applications of GLP-1 agonists will significantly impact the landscape of obesity interventions including surgical options.

Objective

- To describe overall monthly trends in dispensing episodes of GLP-1 among person without T2D.

Methods

- Retrospective analysis of health insurance claims from 01 January 2019 to 31 October 2023.
- Inclusion criteria:
- Non-ASO pharmacy and medical benefits
- At least one filled prescriptions of a GLP-1 agonist identified using national drug codes (NDCs), any dosage, Table 1
- At least 12 years of age at time of dispensed prescription
- Never diagnosed with T2D
- Comorbidity of interests were identified using the International Classification of Disease (ICD-10-CM) diagnosis codes:
  - Hypertension (HT)
  - Stroke
  - Coronary heart disease
  - Gout
  - Nonalcoholic fatty liver disease
  - Malignant cancers
- Monthly dispensing rates per 100,000 enrollees were examined and averaged over each study year.

Table 1. List of included GLP-1 products

Product Name	Number of unique NDCs	Compound Name	First Approval Year
ADLYXIN	3	Lixisenatide	2016
BYDUREON*	7	Exenatide	2012
BYETTA	9	Exenatide	2005
MOUNJARO	12	Tirzepatide	2022
OZEMPIC	11	Semaglutide	2017
RYBELSUS	7	Semaglutide	2019
TANZEUM	5	Albiglutide	2014
TRULICITY	13	Dulaglitude	2014
VICTOZA	5	Liraglutide	2010

*discontinued

Results

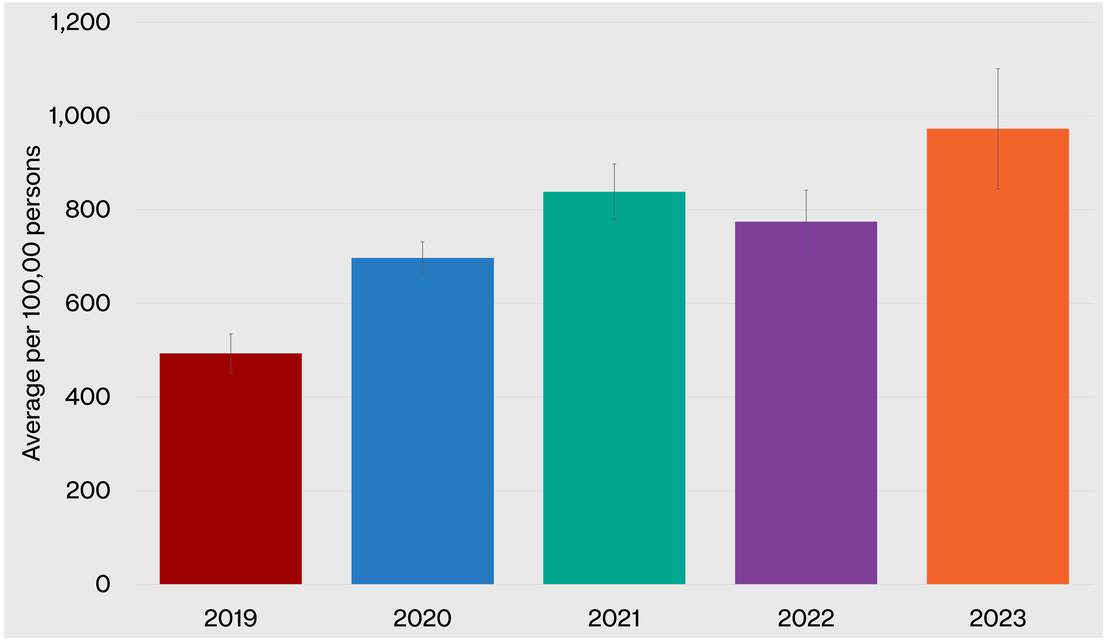

Figure 1. Yearly average trends in GLP-1 users without T2D, 2019-2023

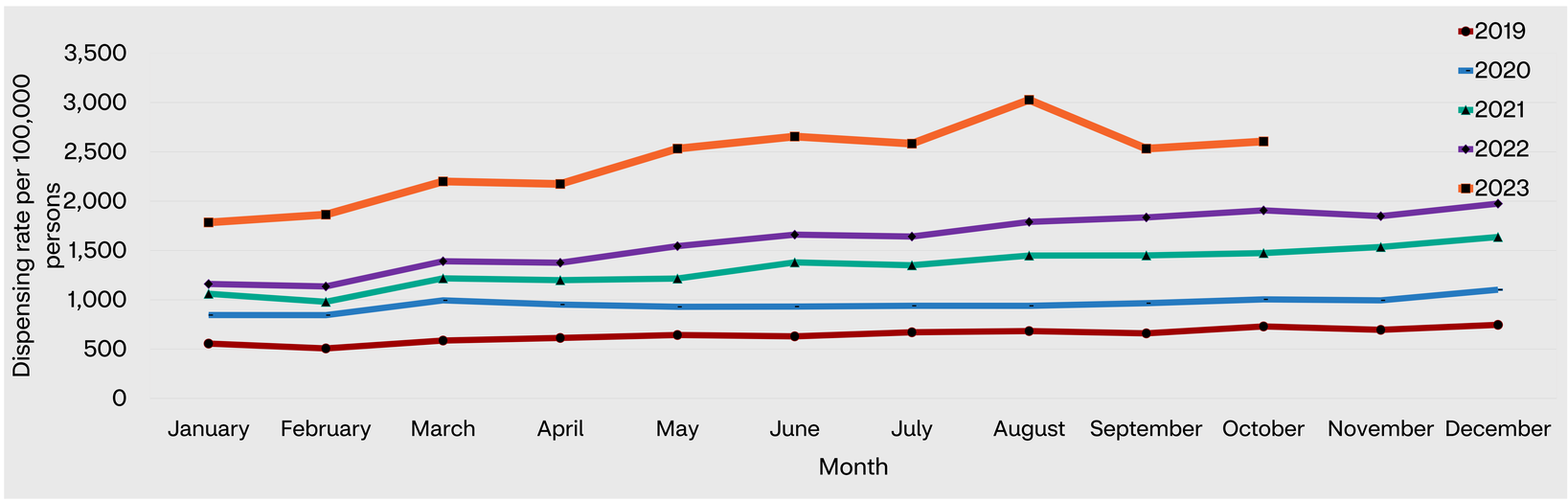

Figure 2. Monthly dispensing rates of GLP-1 agonists persons without T2D, 2019-2023

Results

- For every 100,000 enrollees aged >12 years without T2D, 493 used GLP-1 agonists in 2019, 697 in 2020, 838 in 2021, 774 in 2022, and 973 in 2023, respectively.
- Similar to the user trend, the monthly trend in drug dispensing for GLP-1 agonists continuously increased over the study period.
- There were 644 dispensing of GLP-1 agonists in 2019, 954 in 2020, 1329 in 2021, 1605 in 2022, and 2396 up to October in 2023, each per 100,000 persons.

Conclusions

- Uptake of GLP-1 agonists trended up
  - in the number of users
  - In the number of prescriptions filled
- Further research may investigate this pattern among different age groups and clinical comorbidity profiles.

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