

# Trends in Glucagon-like peptide-1 (GLP-1) Receptor Agonist Prescribing in England: A Data Analysis Using NHS Prescription Episodes Statistics (PES)

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## Background

- Glucagon-like peptide-1 (GLP-1) receptor agonists (RA), established in diabetes care, have recently gained prominence in treating obesity.
- Recent data highlight the promising potential of GLP-1 RA in reducing major adverse cardiovascular events (incl. myocardial infarction, stroke, and cardiovascular death) and liver fat content, potentially slowing the progression of metabolic-associated steatotic liver disease (MASLD).<sup>1</sup>

## Objectives

- This study aimed to assess developments in GLP-1 prescribing in England.

## Methods

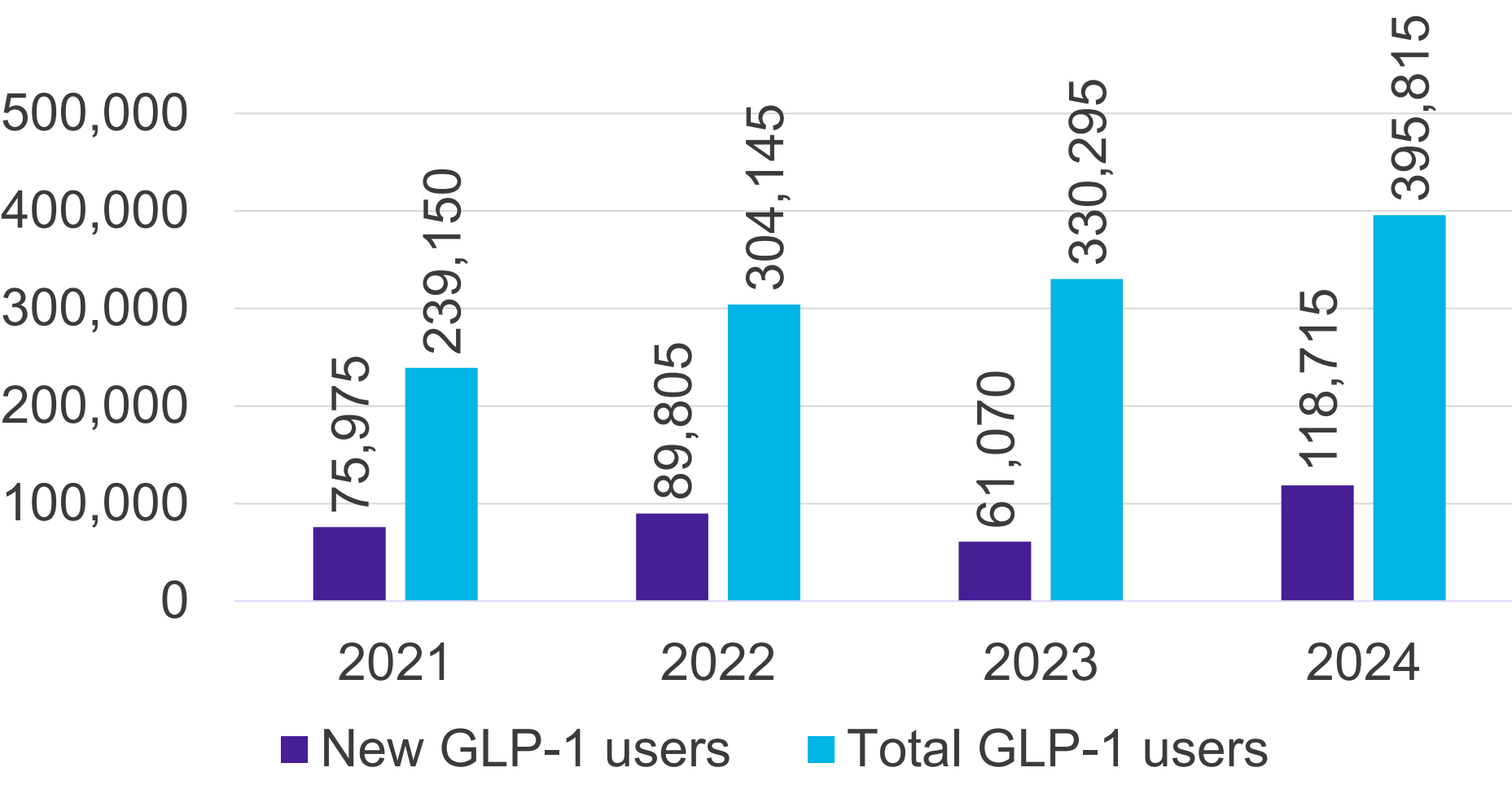
- This retrospective data analysis was based on the Prescription Episodes Statistics (PES) database generated utilizing data submitted to the National Health Service Business Services Authority (NHSBSA).
- It includes current years of primary care prescription data from England, with patient-level demographics, prescription details, product specifics, and prescriber information.
- Adults (≥18 years) with at least one GLP-1 receptor agonist prescription (dulaglutide, exenatide, liraglutide, lixisenatide, semaglutide, or tirzepatide) from 2021 to 2024 were included.
- Descriptive analysis covered user counts, prescriptions, demographics, GLP-1 type, costs, and comedications.
- New users were identified by a one-year prescription-free period using British National Formulary (BNF) codes.

## Results

### GLP-1 prescriptions

- A total of 513,315 individuals received GLP-1 prescriptions during the observation period (see **Figure 1**).
- The number of new users increased annually by 16.0% (from 75,975 in 2021 to 118,715 in 2024), although not consistently.
- The total number of annual users grew by 18.3% (from 239,150 in 2021 to 395,815 in 2024).

**Figure 1. Count of annual new and total GLP-1 users between 2021 and 2024**



### Patient characteristics

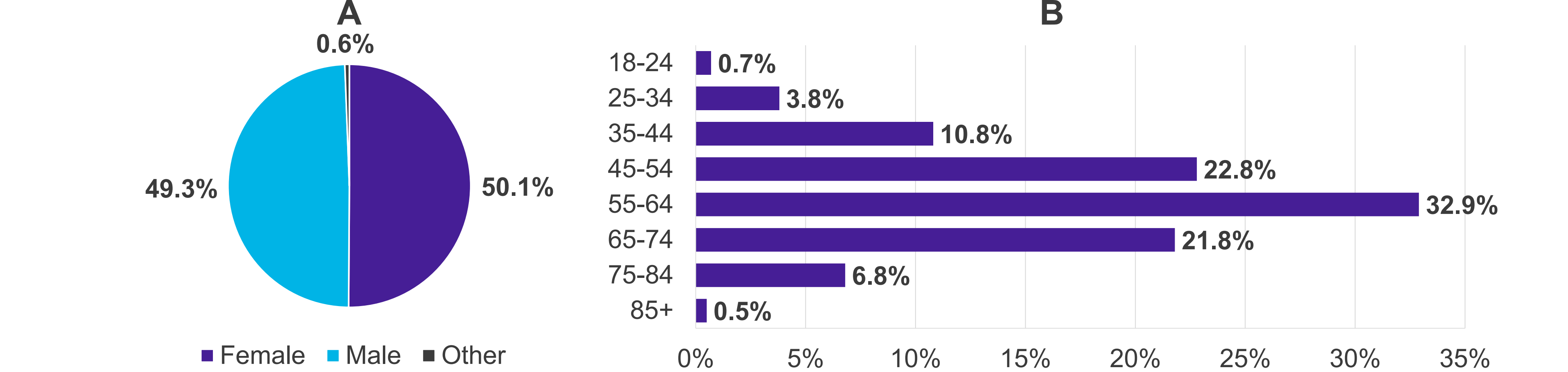
- Sex and age distribution of patients initiating treatment with GLP-1 receptor agonists remained stable.
- There were slightly more women (50.1%) among new users (see **Figure 2A**). Most initiations aged 55-64 years (see **Figure 2B**).

### References:

<sup>1</sup>Arredouani A. GLP-1 receptor agonists, are we witnessing the emergence of a paradigm shift for neuro-cardio-metabolic disorders?. *Pharmacol Ther.* 2025;269:108824.

## Results (cont.)

**Figure 2. Sex [A] and age [B] distribution of patients initiating treatment with GLP-1 receptor agonists between 2021 and 2024**



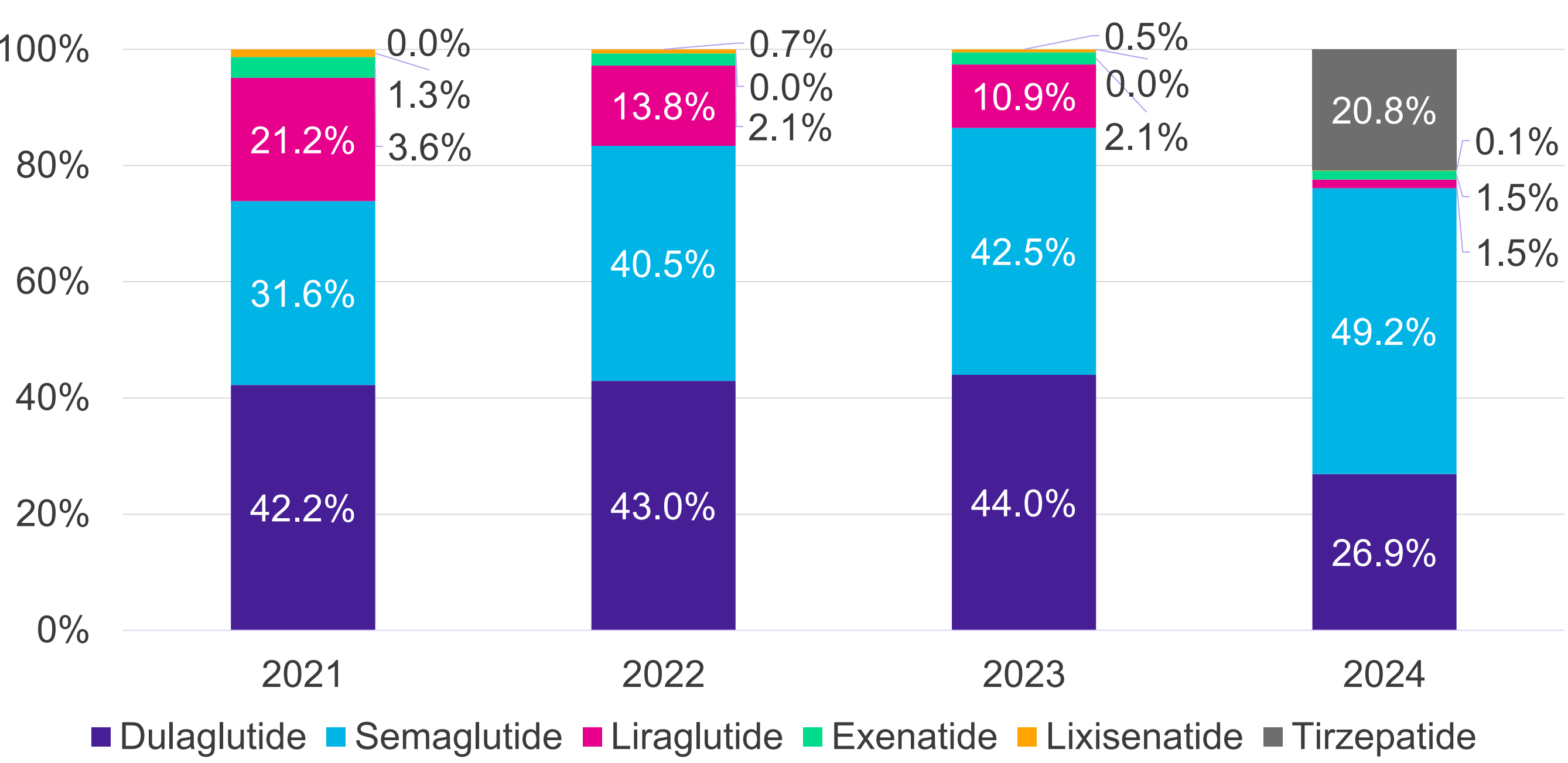
### GLP-1 agents distribution

- From 2021 to 2024 semaglutide use increased to 49.2%, dulaglutide usage declined to 26.9%, liraglutide nearly disappeared from the market (1.5%), and tirzepatide reached 20.8% market share by 2024 (see **Figure 3**).

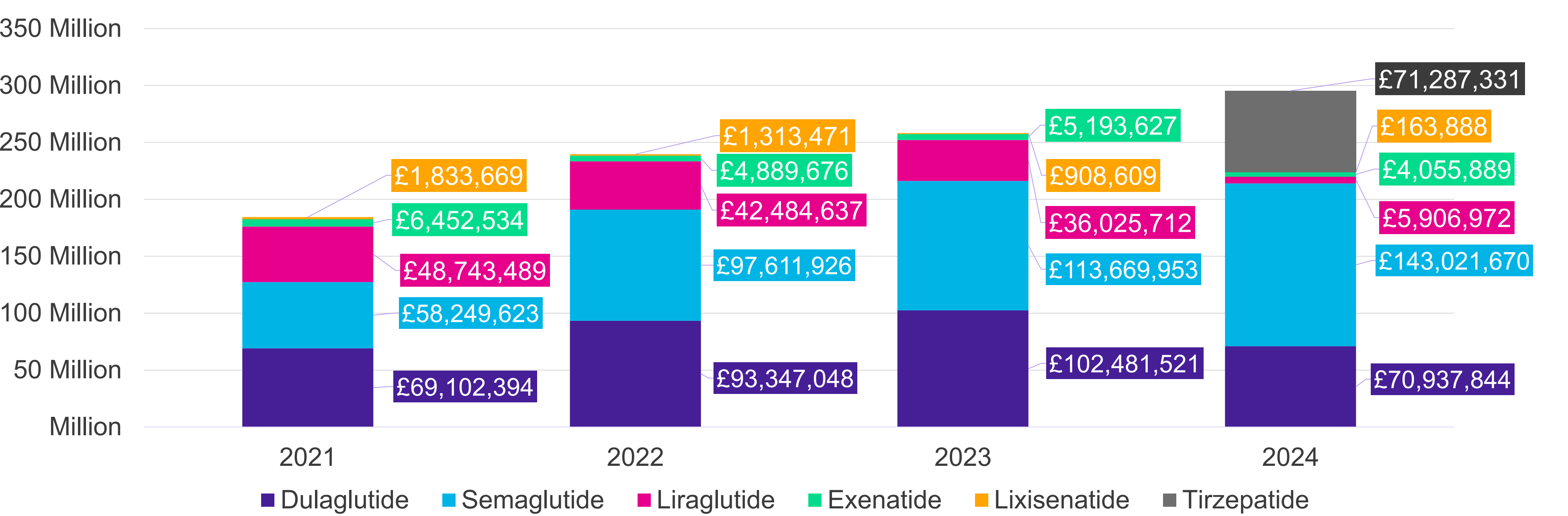
### Costs

- Net ingredient costs (NIC) mirrored prescription trends, growing 17.0% annually (from £184.4 million in 2021 to £295.4 million in 2024) (see **Figure 4**).
- Semaglutide accounted for the largest share in 2024 (48.4%).

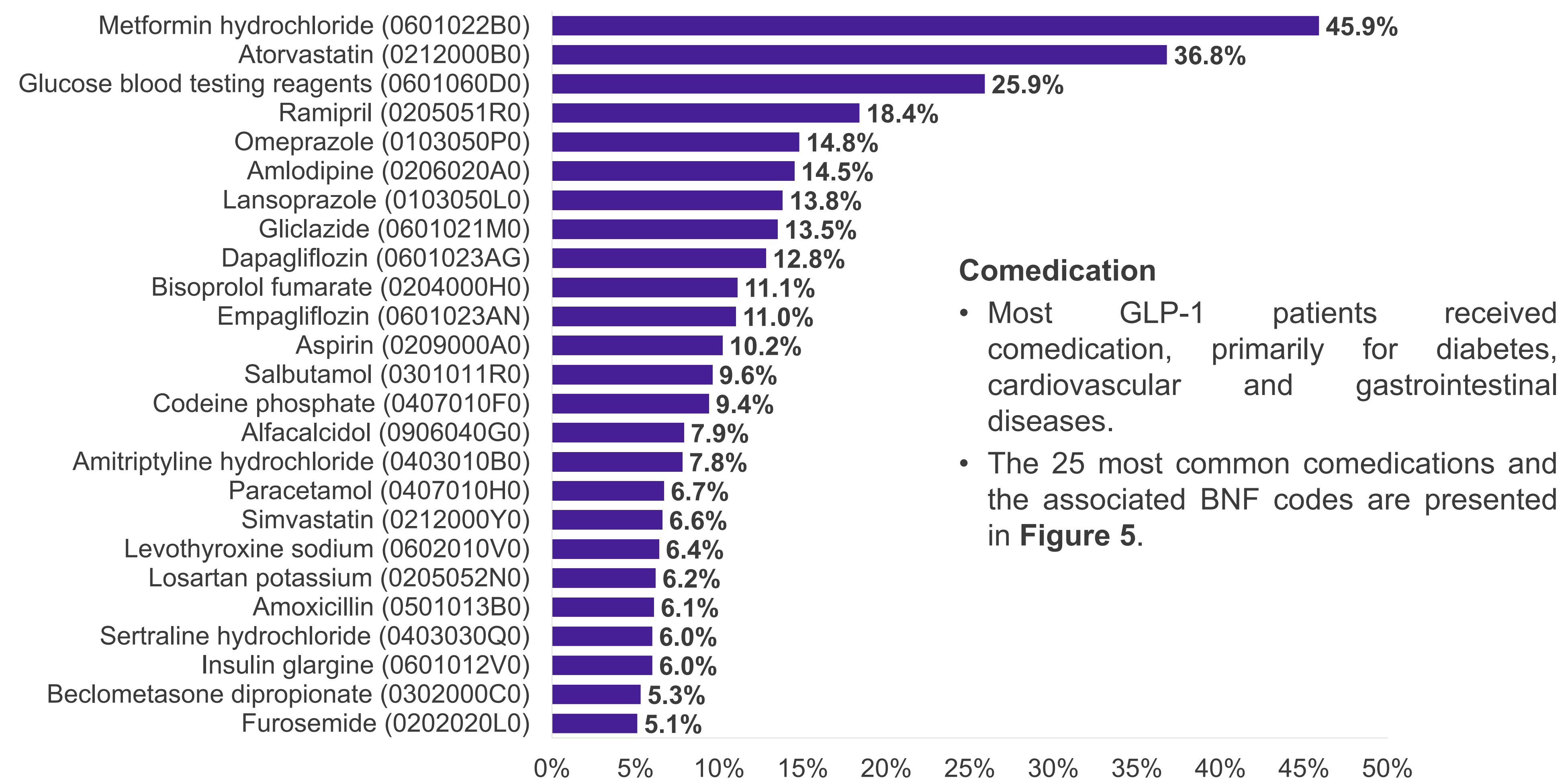
**Figure 3. Distribution of GLP-1 agents prescribed between 2021 and 2024**



**Figure 4. Distribution of GLP-1 agents prescribed between 2021 and 2024**



**Figure 5. Proportion of GLP-1 users receiving comedication in the years 2021 to 2024**



### Comedication

- Most GLP-1 patients received comedication, primarily for diabetes, cardiovascular and gastrointestinal diseases.
- The 25 most common comedications and the associated BNF codes are presented in **Figure 5**.

## Conclusion

- This analysis highlights significant growth in GLP-1 receptor agonist use and prescribing costs in England.
- Semaglutide has emerged as the dominant agent, with tirzepatide showing similar potential, indicating shifting prescribing patterns.
- The findings underscore the growing significance of GLP-1 therapies in managing obesity and diabetes; a trend likely to continue.