Dose Escalation Patterns in Patients with Overweight or Obesity Initiating Semaglutide 2.4 mg: A 6-Month Follow-Up in a Real-World Setting in the United States

Lei Lv, PhD[1]; Wojciech Michalak, MS[1]; Bríain Ó Hartaigh, PhD[1]; Zhenxiang (Jenny) Zhao, PhD[1]; Anthony Fabricatore, PhD[1]

Poster
EPH161
https://sciencehub.novonordisk.com/ispor-us2023/Lv.html?cid=qr-2597010536

Despite the supply shortage, more than half of real-world patients initiating once-weekly semaglutide remained on treatment at 6 months

52.2%

Patients persisted with semaglutide treatment at 6 months

Objective

- Once-weekly subcutaneous semaglutide 2.4 mg is approved for chronic weight management in adults with obesity (or overweight with ≥1 weight-related comorbidity).[1]
- This study describes real-world treatment patterns of semaglutide 2.4 mg for 6 months following medication initiation when availability of escalation and maintenance doses were limited.

Methods

- This was a non-interventional, retrospective cohort study conducted using the IQVIA PharMetrics Plus administrative claims database (stockpiling of doses was permitted).
- The study population was patients aged ≥18 years with ≥1 filled prescription for semaglutide 2.4 mg between June 15, 2021–September 30, 2021 (patient identification period) (**Figure 1**).
- The date of the first prescription fill of the starting dose semaglutide <2.4 mg was the index date (**Figure 1**).
- Patients with 6 months' insurance enrollment pre- and post-index date were included.
- Demographic and clinical characteristics were assessed 6 months pre-index date (**Figure 1**).
- The primary endpoints were the proportion of patients reaching the maintenance dose of 2.4 mg, time from treatment initiation to this maintenance dose and persistence rates within a 6-month, post-index period (persistence = a treatment gap of the next fill <45 days).

Key results

- Of the 1699 eligible patients, 79.8% were female and mean age was 47.2 years (standard deviation [SD] 10.3) (**Table 1**).
- Among patients with non-missing body mass index (BMI) data (n=1295), mean BMI was 35.4 kg/m^2 (SD 7.3) (**Table 1**); BMI based on diagnosis codes.
- The most prevalent comorbidities in the total population were hypertension (36.7%), dyslipidemia (36.0%) and musculoskeletal pain (34.7%) (**Table 2**).
- Median time to reach maintenance dose was 105 days (IQR: 76.5–127.0) and 52.2% of patients who initiated semaglutide treatment remained on therapy at 6 months compared with persistence rates of 16–42% for other anti-obesity medications in the literature (**Figure 2**).[2]
- Overall, 40.8% of patients initiating semaglutide reached the 2.4 mg maintenance dose within 6 months.

Figure 1: Study schematic

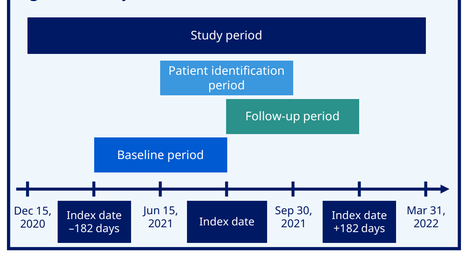


Table 1: Baseline characteristics

	Initiating semaglutide* (N=1699)
Mean age, years (SD)	47.2 (10.3)
Sex, n (%)	
Female	1355 (79.8)
Male	344 (20.2)
Insurance, n (%)	
Commercial	1160 (68.3)
Self-insured	539 (31.7)
Region, n (%)	
Midwest	439 (25.9)
Northeast	512 (30.2)
South	652 (38.4)
West	95 (5.6)
Missing	1 (0.1)
BMI	
N	1295
Mean BMI (SD)	35.4 (7.3)
BMI group**, n (%)	
Overweight	97 (7.49)
Obesity - unspecified	480 (37.1)
Obesity Class I	120 (9.27)
Obesity Class II	96 (7.41)
Obesity Class III	498 (38.5)

*The initiating cohort was defined as those who started with a prescription for <2.4 mg semaglutide and then possibly increased in dose.
**4 patients with normal weight are not shown in the table.
BMI, body mass index; SD, standard deviation.

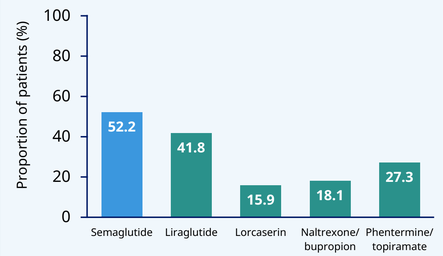
Table 2: Baseline comorbidities

	Initiating semaglutide* (N=1699)
Hypertension	623 (36.7)
Dyslipidemia	612 (36.0)
Musculoskeletal pain	590 (34.7)
Prediabetes	362 (21.3)
Obstructive/mixed sleep apnea	292 (17.2)
Gastroesophageal reflux disease	260 (15.3)
Type 2 diabetes	199 (11.7)
Asthma	119 (7.0)
Polycystic ovary syndrome	89 (6.6)
Knee osteoarthritis	98 (5.8)
Urinary incontinence	26 (1.9)
Psoriasis	24 (1.4)
HFpEF	7 (0.4)

*The initiating cohort was defined as those who started with a prescription for <2.4 mg semaglutide and then possibly increased in dose. All data are n (%).
HFpEF, heart failure with preserved ejection fraction.

Figure 2: Persistence with semaglutide treatment at 6 months compared with published data for other agents[2]

Key result



Conclusion

- This study had limitations, as it was based on a claims database and was conducted at a time when semaglutide was in short supply.
- These real-world findings suggest that, despite supply shortage in the first year of semaglutide 2.4 mg availability in the US, more than half of patients remained on therapy at 6 months, and 40.8% reached the maintenance dose of 2.4 mg once-weekly.
- Future research on treatment patterns will be warranted once supply is fully restored.

[1]Novo Nordisk Inc., Plainsboro, New Jersey, USA

This non-interventional study was funded and conducted by Novo Nordisk. Lei Lv (presenting author) is an employee of Novo Nordisk. The authors acknowledge the medical writing assistance of Gillian Groeger, Ashfield MedComms (funded by Novo Nordisk).
Presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) conference, May 7–10, 2023, Boston, MA, USA.

1. Novo Nordisk, US FDA Prescribing Information for semaglutide 2.4 mg, accessed from: https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/215256s000lbl.pdf on Mar 28, 2023; 2. Ganguly *et al. Diabetes Res Clin Pract.* 2018;143:348–56.