

# Trends in semaglutide prescribing and dispensing – A nationwide register-based study

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## Introduction

Health authorities all over the world have confirmed supply shortages of semaglutide due to massive increase in demand.<sup>1</sup> Semaglutide was originally a medication for the treatment of type 2 diabetes<sup>2</sup>, yet it has gained enormous popularity as a weight loss medicine<sup>3</sup>. This research aims to assess trends of prescribing and dispensing of semaglutide using nationwide register data.

## Method

Data on all semaglutide prescriptions and dispensations from 1 January 2019 to 31 December 2022 were retrieved from the centralized national Prescription Centre. Furthermore, monthly numbers of reimbursed dispensations were collected from the Finnish Prescription Register. During the study period semaglutide medications available in Finland were only indicated for the treatment of type 2 diabetes, and reimbursement was restricted to third-line and later to second-line treatment for patients with baseline BMI≥30kg/m<sup>2</sup>. Descriptive analyses were conducted using R.

## Conclusion

Consumption of semaglutide has increased dramatically during the past years due to licensed and off-label usage, which has caused medicine shortages. Semaglutide medication approved for weight management will be available shortly, and the authorities should prepare for further increase in demand and in reimbursements costs.

## Results

Altogether 339,000 semaglutide prescriptions were prescribed for 85,600 patients. 8,700 patients had received prescription of both injectable and oral semaglutide. The level of monthly prescriptions increased ninefold from 2019 to 2022. A remarkable increase in prescribing was seen from 2021 to 2022 (**Figure 1**); for women aged 18–45 the number of prescriptions more than tripled. 35% of the all prescriptions were prescribed from private sector, and the share of prescriptions from private sector increased from 22% in 2019 to 44% in 2022. 70% of the dispensations were reimbursed. For 18–34 years old 77% of the dispensations were non-reimbursed, whereas for patients aged 65+ the percentage was 16% in 2022. The share of non-reimbursed dispensations increased from 16% to 38% during 2019–2022 (**Figure 2**), which indicates increased off-label usage of semaglutide.

Figure 1. Semaglutide prescriptions by age group 2019–2022.

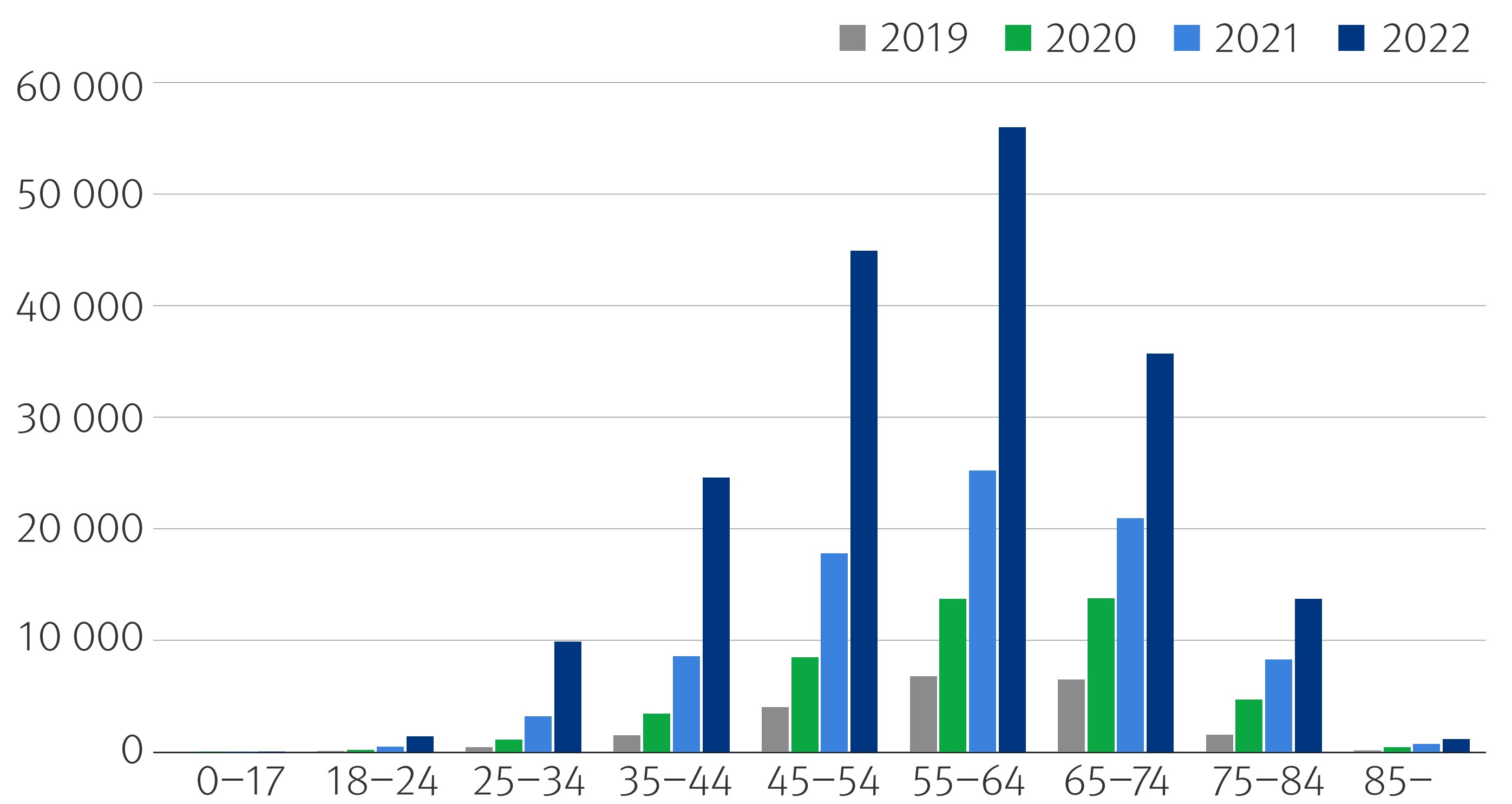
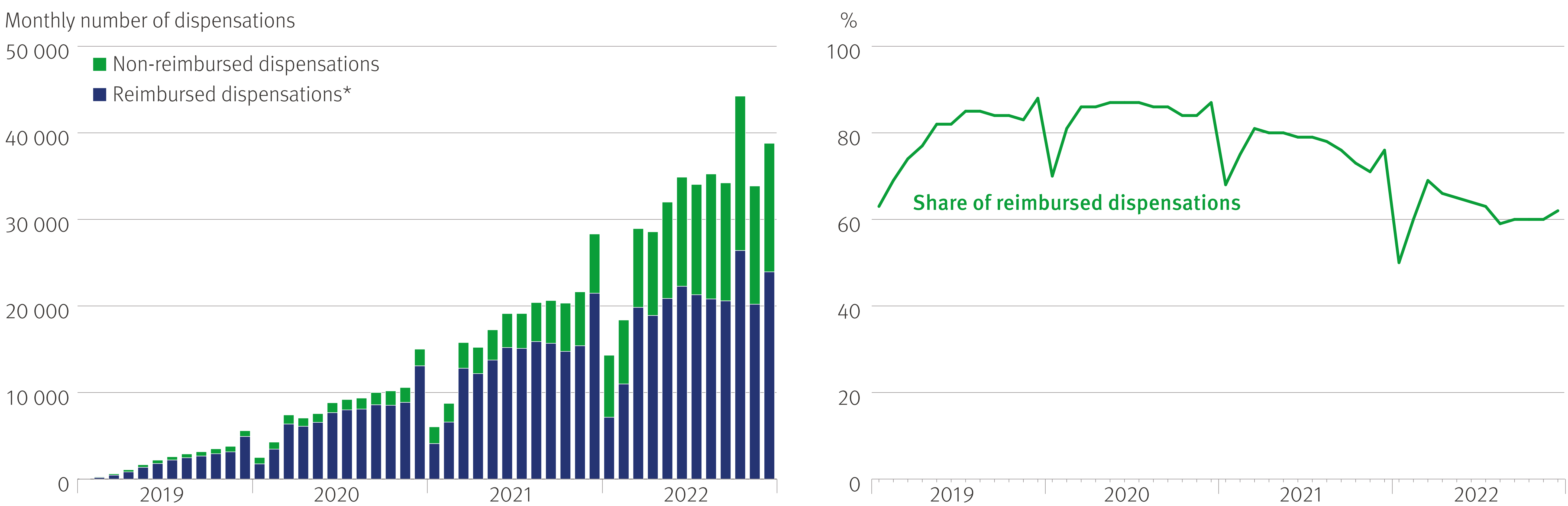


Figure 2. Reimbursed and non-reimbursed semaglutide dispensations 2019–2022



\*Reimbursement criteria for semaglutide in treatment of type 2 diabetes in Finland: BMI≥30 kg/m<sup>2</sup>, and adequate glycemic control is not achieved with at least one medicinal product for the treatment of diabetes. Semaglutide injection reimbursed as a second-line treatment since 1.3.2021 and tablet since 1.3.2022.

## References

1 European Medicines Agency 2022. Shortage of Ozempic (semaglutide). EMA/798839/2022.  
2 Aroda VR, Ahmann A, Cariou B, et al. Comparative efficacy, safety, and cardiovascular outcomes with once-weekly subcutaneous semaglutide in the treatment of type 2 diabetes: Insights from the SUSTAIN 1–7 trials. Diabetes & Metabolism. 2019;45(5):409–418.  
3 Suran M. As Ozempic’s Popularity Soars, Here’s What to Know About Semaglutide and Weight Loss. JAMA. 2023;329(19):1627–1629.

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