The Impact of Semaglutide Usage on Hospitalization and Healthcare Costs in Israel

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BACKGROUND

Semaglutide, a glucagon-like peptide-1 (GLP-1) receptor agonist, is approved for the treatment of type 2 diabetes (T2D), with evidence of improvements in cardiovascular and renal outcomes.
Since its introduction in Israel in 2019, semaglutide has been widely used in treatment of T2D.
While many randomized controlled trials have demonstrated the effectiveness of GLP-1 RAs in clinical health care outcomes, real-world data on their impact on hospitalization and healthcare cost is limited.

OBJECTIVES

To evaluate healthcare costs, hospitalization days and clinical outcomes among patients with type 2 diabetes (T2D) in Israel treated with Ozempic ®. Outcomes included BMI, glucose, HbA1c, lipid profiles (LDL, HDL, TG), myocardial infarction, stroke and major adverse cardiovascular events.

METHODS

Retrospective cohort study using Leumit Health Services electronic health records. Patients with T2D were included if purchased semaglutide for at least 5 months during 2020–2023 and had BMI, glucose and HbA1c measurements within 180 days before treatment initiation. Propensity score matching paired semaglutide users 1:1 with non-GLP-1 users based on demographic, clinical and comorbidity profiles. Primary outcomes were healthcare costs and hospitalization days.

RESULTS

Table 1. Healthcare cost per patient year in NIS (N = 6,359 per group)

Exchange rate: 1 EUR = 4 NIS

Event description	Control Mean ± SD	Semaglutide Mean ± SD	p-value
years follow up	1.887 ± 0.237	1.940 ± 0.163	<0.001
Unknown	-0.22 ± 10.62	0 ± 0	0.0832
Hospitalization	7,127 ± 31,342	3,287 ± 17,581	<0.001
ED	324 ± 725	320 ± 696	0.0385
Day hospitalization	370 ± 2,437	448 ± 2,688	0.0072
institute Clinical	2,901 ± 7,407	3,309 ± 6,497	<0.001
Outpatient clinic	277 ± 1,057	329 ± 1,225	<0.001
Special treatment	768 ± 6,419	524 ± 5,408	0.0018
Dialyses	500 ± 8,942	235 ± 5,724	0.0093
Surgery	4,058 ± 17,544	4,504 ± 19,598	Verify*
Total	**16,324 ± 45,830**	**12,956 ± 35,983**	**<0.001**

Costs in NIS. Follow-up in years. ED = emergency department. *Surgery p-value requires confirmation. Values below 0.001 shown as <0.001.

3,368
NIS lower cost per patient year vs matched controls

Table 2. Hospitalization days per patient year (N = 6,359 per group)

Event description	Control Mean ± SD	Semaglutide users Mean ± SD	p-value
Hospitalization	3.706 ± 18.918	1.458 ± 8.024	<0.001
ED	0.002 ± 0.054	0.001 ± 0.041	0.0386
Day hospitalization	0.020 ± 0.573	0.010 ± 0.262	0.0072
Surgery	0.463 ± 5.086	0.446 ± 3.759	<0.001
Total	**4.326 ± 20.927**	**1.976 ± 10.240**	**<0.001**

2.25
Fewer hospitalization days per patient year vs matched controls

DISCUSSION

In 6,359 T2D patients treated with semaglutide for at least 5 months (mean follow-up: 1,000 days), hospitalization days and per-patient healthcare spending were significantly lower than in matched controls, including semaglutide costs. Savings emerged relatively quickly, mainly due to improved clinical outcomes.

CONCLUSION

Semaglutide use was associated with lower healthcare costs and fewer hospitalization days in this matched T2D cohort. The reported saving was 3,368 NIS (approximately 850 €) per patient year.