Scientometrica 1 (2025) 135–142

Contents lists available at GrowingScience

Scientometrica

homepage: www.GrowingScience.com/sci

Real-world effectiveness of semaglutide for weight loss: A comprehensive review of evidence

Zahra Karimpoor[a] and Hossein Ghanbari[a*]

[a]*Department of Industrial Engineering, School of Engineering, Iran University of Science and Technology, Iran*

C H R O N I C L E

Article history:
Received: November 5, 2025
Received in revised format: November 5, 2025
Accepted: November 31, 2025
Available online:
November 31, 2025

Keywords:
Semaglutide
Real-World Evidence
Weight Loss
Effectiveness
GLP-1 Receptor Agonist
Obesity Pharmacotherapy

A B S T R A C T

Semaglutide, which is a glucagon-like peptide-1 receptor agonist (GLP-1 RA), has shown significant effects for weight loss in RCTs. However, good results obtained during clinical trials are not necessarily reflected in everyday practice because of factors such as adherence, dosing, patient differences, and healthcare system limitations. In this review, we present the results of 67 studies as real-world evidence (RWE) that help to assess semaglutide's effectiveness in weight control. RWE gives a constant message that semaglutide does indeed cause weight loss that is clinically significant in varieties of patients including those with type 2 diabetes (T2D) and simply obesity. Although the reduction in weight in real clinical situations is generally somewhat less than in RCTs, the studies speak of weight losses of 4-6% over 6-7 months and 9-15% over 12 months, with even greater losses among the most compliant patients. Some of the main barriers are identified as high dropout rates, inadequate dose titration, and the effects of both access and cost. Nevertheless, semaglutide proves to be a very effective option in standard care, with its positive effects on glycemic control, cardiovascular risk factors, and patient-reported outcomes. This paper highlights the importance of RWE in confirming, and sometimes even augmenting, RCT outcomes, as well as in providing support for clinical decision making in weight loss therapy.

© 2025 by the authors; licensee Growing Science, Canada.

1. Introduction

The 21st century is marked by a worldwide epidemic of obesity and its related metabolic disorders, mainly type 2 diabetes (T2D). The WHO and several other health organizations have repeatedly marked the increase in obesity as a serious issue, pointing out that this is a complicated, multifactorial, chronic, and relapsing disease that dramatically raises the risk of heart disease, certain cancers, orthopedic problems, and death from any cause. The increase in the number of obese people has put a huge burden on healthcare systems, the economy, and the quality of life of millions of people all over the world. For a long time, the main treatment for obesity has been lifestyle changes, including better nutrition, more physical activity, and psychological support. These treatments are basic but usually only have a modest effect and, more importantly, do not last for most people; this the issue of the powerful physiological mechanisms that prevent weight loss and facilitate gain is brought into the light again.

The acknowledgment of obesity as a chronic condition demanding continuous medical care has accelerated the process of finding pharmacological interventions that are both effective and safe. The anti-obesity medications (AOMs) have undergone a significant transformation, shifting from older, often centrally-acting agents with meager efficacy and questionable side-effects to newer, safer options. The development of incretin-based therapies especially the glucagon-like peptide-1 receptor agonists (GLP-1 RAs) has changed the whole attitude towards obesity treatment. GLP-1 is a natural hormone made by L-cells in the intestine as a reaction to the consumption of nutrients. Its actions in the body are varied; one of them is the

* Corresponding author.
E-mail address: Hossein_ghanbari@ind.iust.ac.ir (H. Ghanbari)

ISSN 3115-8455 (Online) - ISSN 3115-8447 (Print)
© 2025 by the authors; licensee Growing Science, Canada
doi: 10.5267/j.sci.2025.4.005

stimulation of insulin secretion that is glucose-dependent, inhibition of glucagon release, slowing down of gastric emptying, and more importantly, the luring of appetite and food intake through direct action on the hypothalamus and brainstem centers which makes it particularly relevant for weight control.

Semaglutide, a GLP-1 RA with 94% similarity to human GLP-1, is a modern therapy that is very advanced in this group. Peptide development was a major breakthrough and more so because of structural modification that provides a longer half-life, making it possible to administer once weekly in a very convenient way (OW semaglutide, marketed as Wegovy® for obesity) and, moreover, a daily oral formulation (Rybelsus® for T2D) that is very ingenious. The effectiveness of semaglutide was clearly demonstrated in the pivotal clinical trial program Semaglutide Treatment Effect in People with obesity (STEP). These strict randomized double-blind placebo-controlled trials yielded extraordinary results concerning weight loss. For example, STEP 1 revealed that adults with obesity (or overweight with comorbidities) experienced an average reduction of 14.9% from the baseline in weight at 68 weeks, with more than 86% of the participants recording a weight loss of at least 5%. The following tests proved these solid effects in different populations, including those with T2D (STEP 2) where the 1 mg dose produced a mean weight loss of 9.5%.

The effectiveness that has been shown in the STEP program and other RCTs is really very strong. Nevertheless, the controlled setting of an RCT applies limitations to its generalizability to the "real world" in an inherent way. RCTs follow very strict protocols: they recruit a very specific patient population, often not including those with significant comorbidities, complex polypharmacy, or certain psychological conditions. They require medication adherence that is very carefully controlled, using methods that include direct observation or detailed accountability, follow protocol-driven dose titration, and provide intensive, standardized lifestyle counseling and follow-up. Therefore, the results from these "explanatory" trials can be taken to answer the question: "Can this treatment work under ideal conditions?"

On the other hand, the real-world evidence (RWE) that one gets from observational studies poses the equally significant and complementary question: "Is this treatment effective when applied in the usual clinical settings?", which RWE is. It is the result of data that have been gathered beyond the restrictions of RCTs, which are electronic health records (EHRs), insurance claims databases, patient registries, and prospective observational studies. This evidence represents the daily trials and tribulations of a more diverse patient population, which consists of people with a wider range of ages, comorbidities, socioeconomic backgrounds, and levels of health literacy. In this scenario, factors such as medication adherence, persistence, dose titration, and management of side effects are not dictated by a study protocol but instead influenced by a multitude of real-world variables. These comprise patient motivation, tolerability of gastrointestinal side effects, the drug's cost and insurance coverage, the quality of patient-clinician interaction, access to multidisciplinary support, and the presence of clinical inertia, among others.

he process of transferring the efficacy demonstrated in RCTs to effectiveness in routine clinical practice is not always smooth. The case of semaglutide brings up a few major areas for research through the RWE perspective. The first one is the issue of the amount of weight loss and the possibility of keeping it off. Does the weight loss of more than 15% that is reported in STEP 1 always happen in the clinics, or does it disappear somewhat? Results from studies in other chronic diseases indicate that the real-world effectiveness could be 20-50% less than the RCT efficacy. The second is the issue of persistence and adherence which is very important for obesity, which is a chronic disease. The GLP-1 RAs medication is meant for the long-term so that the weight loss is maintained. Data on the real-world situation such as discontinuation rates, reasons for stopping (e.g. cost, side effects, loss to follow-up), and the patient's weight change after discontinuation are very important for the understanding of the impact of these therapies on public health in the long run.

To begin with, the actual dosage of medications given during practice may vary significantly from the protocols that were set for the clinical trials. The STEP trials used a strict, unyielding titration schedule that eventually led to a 2.4 mg maintenance dose. However, in daily practice, doctors may be more patient and gradual with their titration in consideration of the patient's tolerance, or the patients may get stuck taking very low doses because of the side effects or the doctor's reluctance to increase the dose, which can discourage weight loss. Moreover, the supply of real-world data that shows the comparative effectiveness of semaglutide over other AOMs or the older glucose-lowering agents in terms of their practical application is highly valuable for formulary decisions and clinical guidance. So how does it stand against liraglutide, the first GLP-1 RA for treating obesity, or the latest dual agonist tirzepatide in the real-world scenario, not in a trial head-to-head?

Fifth, RWE can provide a richer perspective on the impact on various patient groups. Among others, this comprises the elderly, adolescents, different races, patients with severe obesity (Class II/III), and those with Type 2 Diabetes (T2D) versus those without, and, most notably, the special populations like people with a past of bariatric surgery or HIV positive persons. RCTs can be diverse, but they might not have been capable of doing in-depth analyses of all these subgroups due to insufficient power. Last but not least, the greater benefits and safety in standard treatment need to be recorded. This inquiry covers not just the case of T2D glycemic control but also the impacts on blood pressure, lipid profiles, liver fat, overall life quality, and medication satisfaction. While the RCTs determine the safety of the product, RWE is capable of spotting the rarest side effects and validating the drug's tolerability in the real world along with the coping mechanisms for the common GI side effects, such as diarrhoea and constipation, and others. RWE is one of the most substantial areas of novel care

delivery models' emergence, especially through the use of digital health platforms and telehealth services, which are geared toward the prescription of semaglutide along with remote monitoring and behavioral coaching. Such models can diminish traditional resistance to accessing care for obesity and possibly affect adherence and outcomes in manners that are just starting to be grasped.

Consequently, the Randomized Controlled Trials (RCTs) that support semaglutide, although strong, do not give a complete view of its use in the fight against the obesity pandemic without the proper systematic synthesis of the increasing amount of Real-World Evidence (RWE). The present review article is aimed to cover this deficit by thoroughly examining and merging the results of 67 real-world studies, which were found through a systematic search on Scopus. Evidence will be critically evaluated with the assistance of:

1. Quantify the real-world effectiveness of semaglutide for weight loss in different formulations and patient populations.

2. Identify and analyze the most significant factors that impact the success of treatment, such as adherence, dosing, and patient characteristics.

3. Evaluate its effectiveness in comparison to other treatment options.

4. Consider all major endpoints it will influence beyond weight; QOL provides a good example.

5. Examine safety and tolerability in diverse clinical settings.

6. Explore whether integrating care models into digital care can be successful.

This review will not only write a concise and practical evidence base for optimal semaglutide implementation in the battle against obesity and type 2 diabetes but also make a synthesis of the entire real-world data pool available to the clinicians, researchers, and policymakers.

2. Real-World Weight Loss Effectiveness

A lot of observational studies have been performed, and semaglutide has always been related to a great loss of weight in the real world, even if the extent of the weight loss is sometimes different from that observed in RCTs.

- **Weight Loss Magnitude and Trajectory:** In a great retrospective study by Samuels et al. (2025), the patients who were persistent with GLP-1 RA therapy (including semaglutide) for at least 12 months had a median weight loss of 14.4%. Likewise, Toliver et al. (2025) revealed the mean weight losses were -13.4% at 6 months and -17.6% at 12 months in patients treated with semaglutide 2.4 mg in combination with a digital support application. Another extensive analysis by Ng et al. (2025) reported a mean weight loss of -14.1% (-14.6 kg) after one year of treatment with semaglutide 2.4 mg. The data for the long-term period of 24 months indicated that the weight loss of about -20% (Toliver et al., 2025) was maintained. Such figures, despite being significant, are still generally somewhat lower than those in pivotal trials, a situation which can be explained by issues mt the lower adhence rates and the slower dose escalation in the real world.

- **Comparison with Other Therapies:** Real-world evidence studies are often conducted to compare semaglutide with other glucose-lowering drugs. It has been established that semaglutideap produces more weight loss than DPP-4 inhibitors, sulfonylureas, and SGLT2 inhibitors (Amamoo et al., 2025; Ostrominski et al., 2025; Tan et al., 2024). In one such RWE comparison, Hoog et al. (2025) reported that tirzepatide managed to produce a larger weight loss than semaglutide, which was in line with their respective clinical trial results.

- **Impact of Formulation:** Semaglutide in both subcutaneous and oral forms shows efficacy. The oral semaglutide studies, mainly conducted on T2D patients, reveal considerable, yet slightly less, weight loss compared to the higher-dose injection formulation authorized for obesity. On-the-ground research on oral semaglutide has noted weight drops between 2-5 kg over the time span of 6-12 months (Fadini et al., 2025; Marassi & Fadini, 2025; Williams et al., 2024; Singh et al., 2024).

3. Factors Influencing Real-World Outcomes

Many things moderate the effectiveness of semaglutide in practice.

- **Persistence and Adherence:** The problem of high discontinuation rates is very significant. According to research done by Abdel-Bary et al. (2025), about 35.6% of the total number of patients were discon-tinuing the use of GLP-1 RA after two years, the most frequent reasons being the patients not being followed up, side effects, and losing their insurance coverage. Patients who stopped their treatment however still managed to lose weight and their weight loss was similar to those who never started for instance, indicating that long-term adherence is necessary for the weight loss effect to last (Abdel-Bary et al., 2025). In a study done by Melzer-Cohen et al. (2025), it was found that higher medication adherence, evaluated in terms of Propor-tion of Days Covered (PDC), was linked with greater reductions in HbA1c and body weight to a direct extent.

- **Dose Titration:** Dosing regimens in real life are frequently different from those prescribed in clinical trials. It has been reported that a sizeable part of patients do not go up to the maximum doses recommended. For example, according to Samuels et al. (2025), just 23% of patients using semaglutide increased their dose to 2.4 mg. Likewise, Khare et al. (2025) found diverse dosing practices for semaglutide in France and Italy, where a lot of patients did not get to the upper limits of dosing. This inadequate titration is most probably a reason for the lesser weight loss not being so pronounced in some RWE studies.

- **Patient Characteristics:**

    - **GLP-1 RA Experience:** Patients who have never received GLP-1 RA before have always lost more weight than those who have switched from one GLP-1 RA to another (Yale et al., 2022; Rudofsky et al., 2025).

    - **Baseline Glycemia and Weight:** This study opinion underscores the importance of baseline knowledge in dermatology for recognition of hormone-treated conditions for appeared safely.

    - **Diabetes Status:** In patients with T2D, the weight loss is usually not as clear as in those without diabetes, but it is still considered clinically significant (Mayer & Fontelo, 2024; Hankosky et al., 2025).

    - **Special Populations:** Semaglutide has been proven to be effective in certain groups, such as patients suffering from familial partial lipodystrophy (Lamothe et al., 2025), individuals living with HIV (Haidar et al., 2024), and patients with previous bariatric surgery (Milad et al., 2025).

4. Benefits Beyond Weight Loss

RWE has confirmed that the positive effects of semaglutide are not just limited to weight loss, but the drug also plays a major role in the overall enhancement of cardiometabolic health.

- **Glycemic Control:** Semaglutide treatment in individuals with type 2 diabetes (T2D) was linked to a very signifi-cant decrease in HbA1c levels with a median of reduction between -0.8% and -1.5% as shown in various real-world studies (Delgado et al., 2025; Saravanan et al., 2024; Napoli et al., 2023).

- **Cardiometabolic Parameters:** Blood pressure decreases, better lipid profiles, and reduction of waist size are some of the changes that are most frequently discussed (Fiore et al., 2025; Costa et al., 2025; Pantanetti et al., 2024).

- **Composite Endpoints:** It is evident from many studies that a considerable percentage of patients reach composite endpoints, for instance, a decrease in HbA1c of at least one percent and a five percent loss of weight, which un-derline the therapy's double advantage (Saravanan et al., 2024; Bellido et al., 2022).

- **Patient-Reported Outcomes:** Semaglutide therapy has been correlated with enhancement of quality of life as well as treatment satisfaction that were evaluated by SF-36 and DTSQ among others (Wolffenbuttel et al., 2023; Rudofsky et al., 2025; Pantanetti et al., 2024).

5. Safety and Tolerability in Real-World Settings

The safety profile of semaglutide in RWE is in line with the known class effects of GLP-1 RAs. Among the adverse events in the gastrointestinal tract (GI), nausea, diarrhea, vomiting, and constipation are the events that are most commonly reported and, at the same time, they are the most common reason for stopping treatment (Kushner et al., 2025; Thomsen et al., 2025). The majority of GI events are of mild to moderate severity and are frequently short-lived, primarily happening during the dose-escalation period. RWE studies have not reported any new safety signals, and severe hypoglycemia, which is very rare, occurs mainly in patients receiving insulin or sulfonylureas alongside. Even though there are some concerns regarding

rare side effects like pancreatitis and NAION, large RWE analyses have not shown a risk that is clearly increased (Klonoff et al., 2024; Thomsen et al., 2025).

6. Novel Care Models and Digital Integration

It seems that the use of semaglutide in combination with structured support programs results in better outcomes. The case of digital health platforms and telehealth services that pair semaglutide with behavioral coaching, dietary advice, and regular monitoring is that they have shown weight loss results that come very close to those of RCTs (Seier et al., 2025; Richards et al., 2025; Ard et al., 2024). These models overcome access issues and deliver the multidisciplinary support which is essential for managing obesity in the long term.

7. Conclusion

The wide-ranging analysis of real-world evidence strongly supports the use of semaglutide as a game changer in the care of patients with obesity and diabetes. The drug provides metabolic health benefits and weight loss equivalent to those seen in clinical trials. The total evidence from various population groups and health-care systems reveals that patients commonly lose from 5% to 15% of their weight, and this is always accompanied by improved blood sugar levels and other parameters of health. Nevertheless, the real-world scenario is also one of less powerful effect, where the outcomes are strongly influenced by factors that are difficult to overcome. A huge number of patients are not able to benefit from the treatment to its full extent due to their physicians' inability to titrate the dose, their intolerance to GI side effects, and the cost of the therapy. The data are unambiguous in that they indicate that the effectiveness of drug is determined by the drug and the system in which it is delivered; the programs that combine the use of semaglutide with structured behavioral support, particularly by means of digital platforms, show that the results attained in the trials can be reproduced in practice by encouraging adherence and managing side effects proactively.

In the near future, there arise numerous pivotal paths towards the continuing research. First of all, the long-term (≥3-5 years) real-world studies are needed as a matter of urgency to find out the sustainability of the weight loss, the effects of treatment cycling (the alternating use due to the cost or the supply), and the very long-term safety profile. Second, the research shift must take place from proving effectiveness to implementing it in the best way possible. This covers such activities as forming and testing predictive models for the patients who are most likely to stick to the treatment and respond, making together with the patient standardized protocols for managing side effects to improve tolerability, and coming up with, not only cost-effective but also large-scale support models for both primary and specialist care. Last but not least, the success of semaglutide calls for a change in the way the public health policy is viewed and done. The future effort should be directed towards fighting the systemic barriers of cost and access by advocating for broad insurance coverage, and by incorporating these very effective pharmacotherapies into public health strategies with the same rigor and fervor as other chronic diseases. The global population suffering from obesity can only then reap the benefits of semaglutide's great promise, so eloquently documented in this wide-ranging real-world evidence, through the overcoming of such challenges.

References

Abdel-Bary, M., Brody, A., Schmitt, J., Prieto, K., Wetzel, A., & Juo, Y. Y. Y. (2025). Treating class 2–3 obesity with glucagon-like peptide-1 agonists: A 2-year real-world cohort study. *Diabetes, Obesity and Metabolism, 27*(6), 3195–3200.

Amamoo, J. J., Doshi, R. P., Noone, J. M., Xie, L., Gamble, C. L., Guevarra, M., Divino, V., Chen, J., & King, A. A. (2025). Once-Weekly Semaglutide Versus Sodium-Glucose Co-transporter 2 Inhibitors: Real-World Impact on Weight, HbA1c, and Healthcare Resource Utilization in Type 2 Diabetes (PAUSE). *Diabetes Therapy, 16*(5), 1033–1048.

Ard, J. D., Hong, Y. R., Foster, G. D., Medcalf, A., Nadolsky, S., & Cardel, M. I. (2024). Twelve-month analysis of real-world evidence from a telehealth obesity-treatment provider using antiobesity medications. *Obesity, 32*(12), 2246–2254.

Bellido, V., Abreu, C. P., Catarig, A. M., Clark, A. J., Barreto Pittol, S., & Delgado, E. (2022). Once-Weekly Semaglutide Use in Patients with Type 2 Diabetes: Results from the SURE Spain Multicentre, Prospective, Observational Study. *Journal of Clinical Medicine, 11*(17), 4938.

Brown, E., Wilding, J., Barber, T. M., Alam, U., & Cuthbertson, D. J. (2019). Weight loss variability with SGLT2 inhibitors and GLP-1 receptor agonists in type 2 diabetes mellitus and obesity: Mechanistic possibilities. *Obesity Reviews, 20*(6), 816–828.

Chun, E., Siojo, A., Rivera, D., Reyna, K., Legere, H., Joseph, R. J., & Pojednic, R. M. (2025). Weight loss and body composition after compounded semaglutide treatment in a real world setting. *Diabetes, Obesity and Metabolism, 27*(3), 1536–1543.

Costa, S., Miranda, C., Elefante, A., Vallone, V. F., Vinci, C., Borroni, F., Brandoni, G., Labate, A. M. M., Lo Pomo, F., & Strazzabosco, M. (2025). Effectiveness and safety of daily oral semaglutide in people with type 2 diabetes mellitus switching from sulfonylureas: A real-world retrospective study. *Diabetes, Obesity and Metabolism, 27*(6), 3084–3093.

de Heide, L. J. M., Wouda, S. H. T., Peters, V. J. T., Oosterwerff-Suiker, M., Gerdes, V. E. A., Emous, M., & van Beek, A. P. J. (2023). Medical and surgical treatment of postbariatric hypoglycaemia: Retrospective data from daily practice. *Diabetes, Obesity and Metabolism, 25*(3), 735–747.

Delgado, E., Morales-Portillo, C., Abreu, C. P., Aliaga-Verdugo, A., Piera-Carbonell, A. M., Cadenas González, A., Amor Valero, J., González López, V. A., Rasmussen, C. L., Scheuer, S. H., & Bellido-Guerrero, D. (2025). PIONEER REAL Spain: A multicentre, prospective, real-world study of oral semaglutide use in adults with type 2 diabetes. *Diabetes, Obesity and Metabolism, 27*(9), 4812–4824.

Fadini, G. P., & Longato, E. (2025). Effectiveness of oral semaglutide versus empagliflozin for the management of type 2 diabetes. PIONEER-2 trial emulation with real-world data. *Diabetes, Obesity and Metabolism*.

Fernando, K., Bain, S. C., Holmes, P., Jones, P. N., & Patel, D. C. (2021). Glucagon-Like Peptide 1 Receptor Agonist Usage in Type 2 Diabetes in Primary Care for the UK and Beyond: A Narrative Review. *Diabetes Therapy, 12*(9), 2267–2288.

Fiore, V., Carbotta, G., Barraco, S., Falasca, P., Aricò, C. N., & Barucca, A. (2025). Real-world retrospective study in elderly patients aged 65 years and older with type 2 diabetes mellitus treated with daily oral semaglutide (SEMA-elderly). *Diabetes, Obesity and Metabolism, 27*(4), 1805–1814.

Gudibanda, S., Govardhane, S., Kaloo, S., Shah, S., Miglani, V., & Verma, G. (2024). Real-World Effectiveness of Oral Semaglutide in Indian Adult Diabetic Patients: Evaluation of EMR-based Data. *Journal of Diabetology, 15*(4), 421–428.

Haidar, L., Crane, H. M., Nance, R. M., Webel, A. R., Ruderman, S. A., Whitney, B. M., Willig, A. L., Napravnik, S., Mixson, L. S., Leong, C. M., Lavu, A., Aboulatta, L., Dai, M., Hahn, A. W., Saag, M. S., Bamford, L. P., Cachay, E. R., Kitahata, M. M., Mayer, K. H., ... Eltonsy, S. (2024). Weight loss associated with semaglutide treatment among people with HIV. *AIDS, 38*(4), 531–535.

Hankosky, E. R., Chinthammit, C., Meeks, A., Huang, A., Ward, J. M., Mojdami, D., & Hunter, T. M. (2025). Real-world use and effectiveness of tirzepatide among individuals without type 2 diabetes: Results from the Optum Market Clarity database. *Diabetes, Obesity and Metabolism, 27*(5), 2810–2821.

Hoog, M., Vallarino, C. R., Maldonado, J. M., Grabner, M., Teng, C., Terrell, K. A., & Richard, E. L. (2025). Real-World Effectiveness of Tirzepatide versus Semaglutide on HbA1c and Weight in Patients with Type 2 Diabetes. *Diabetes Therapy*.

Khare, S., Osumili, B., Debackere, N., Keapoletswe, K., Falato, S., Raoul, T., & Coles, B. D. (2025). Dosing Patterns of Dulaglutide and Semaglutide in Patients with Type 2 Diabetes Mellitus in France and Italy: A Retrospective Cohort Study. *Advances in Therapy, 42*(1), 174–192.

Klonoff, D. C., Hui, G., & Gombar, S. (2024). Real-World Evidence Assessment of the Risk of Nonarteritic Anterior Ischemic Optic Neuropathy in Patients Prescribed Semaglutide. *Journal of Diabetes Science and Technology, 18*(6), 1517–1518.

Krajnc, M., Kuhar, N., & Koceva, A. (2025). Oral semaglutide for the treatment of obesity: a retrospective real-world study. *Frontiers in Endocrinology, 16*, 1593334.

Kushner, R. F., Johansen, O. E., Araujo-Torres, K., Phan, T. M., & Marczewska, A. M. (2025). Symptomatic Adverse Events and Quality of Life Related to Incretin-Based Medicines for Obesity: A Systematic Review Involving >400,000 Subjects. *Obesities, 5*(2), 29.

Lamothe, S., Belalem, I., Vantyghem, M. C., Nobécourt, E., Mosbah, H., Béliard, S., Delemer, B., Dupuis, H., Vandenbroere, P., Scheyer, N., Amouyal, C., Hadjadj, S., Janmaat, S., Vigouroux, C., & Vatier, C. (2025). Safety and effectiveness in an uncontrolled setting of glucagon-like-peptide-1 receptor agonists in patients with familial partial lipodystrophy: Real-life experience from a national reference network. *Diabetes, Obesity and Metabolism, 27*(4), 1815–1825.

Lyu, B., Grams, M. E., Inker, L. A., Chang, A. R., Selvin, E., & Shin, J. (2022). Weight changes following antidiabetic mediation use: Real-world evidence from health system data. *Obesity Science and Practice, 8*(5), 657–669.

Marassi, M., & Fadini, G. P. (2025). Real-world Evidence on Oral Semaglutide for the Management of Type 2 Diabetes. A Narrative Review for Clinical Practice. *Clinical Therapeutics, 47*(1), 102–110.

Marzullo, P., Daffara, T., Mele, C., Zavattaro, M., Ferrero, A., Caputo, M., Prodam, F., & Aimaretti, G. L. (2022). Real-world evaluation of weekly subcutaneous treatment with semaglutide in a cohort of Italian diabetic patients. *Journal of Endocrinological Investigation, 45*(8), 1587–1598.

Mayer, C. S., & Fontelo, P. A. (2024). Semaglutide use in people with obesity and type 2 diabetes from real-world utilization data: An analysis of the All of US Program. *Diabetes, Obesity and Metabolism, 26*(11), 4989–4995.

Melzer-Cohen, C., Mosenzon, O., Aharonovich, A., Karasik, A., & Schechter, M. (2025). Drug adherence, glycemic control, and weight reduction with subcutaneous semaglutide in real-world management of type 2 diabetes. *Diabetes Research and Clinical Practice, 222*, 112086.

Menzen, M., Berentzen, T. L., Catarig, A. M., Pieperhoff, S., Simon, J., & Jacob, S. (2022). Real-World Use of Once-Weekly Semaglutide in Type 2 Diabetes: Results from SemaglUtide Real-world Evidence (SURE) Germany. *Experimental and Clinical Endocrinology and Diabetes, 131*(4), 205–215.

Mertens, J., de Winter, H. T., Dirinck, E. L., Francque, S. M. A., & De Block, C. E. M. (2025). Real-World Evidence of the Effect of Adjunctive Semaglutide on Weight Change, Glycemic Control, and Metabolic Dysfunction-Associated Steatotic Liver Disease in People with Type 1 Diabetes. *Diabetes Technology and Therapeutics*.

Milad, C., Logwin, S., Antón, N., Jiménez Pineda, A., Flores, L., Ibarzábal, A., Moizé, V. L., Pané, A., Vidal Cortada, J. R. C. A., & de Hollanda, A. M. (2025). Treatment of obesity with GLP-1 receptor agonist after bariatric surgery: Real-world evidence; Tratamiento de la obesidad después de la cirugía bariátrica con análogos del receptor de GLP-1: evidencia en vida real. *Medicina Clinica, 165*(4), 107153.

Napoli, R., Berra, C. C., Catarig, A. M., Di Loreto, C., Donatiello, E., Berentzen, T. L., Pitocco, D., & Giorgino, F. L. (2023). Once-weekly semaglutide use in patients with type 2 diabetes: Real-world data from the SURE Italy observational study. *Diabetes, Obesity and Metabolism, 25*(6), 1658–1667.

Ng, C. D., Divino, V., Wang, J., Toliver, J. C., & Buss, M. (2025). Real-World Weight Loss Observed With Semaglutide and Tirzepatide in Patients with Overweight or Obesity and Without Type 2 Diabetes (SHAPE). *Advances in Therapy*.

Ostrominski, J. W., Aroda, V. R., Braae, U. C., Kruse, C., Mandavya, K., & Buse, J. B. (2025). Time to Treatment Intensification with Glucagon-Like Peptide-1 Receptor Agonists Versus Comparators in People with Type 2 Diabetes Treated with Metformin. *Diabetes Therapy, 16*(7), 1465–1478.

Pantanetti, P., Cangelosi, G., Alberti, S., Di Marco, S., Michetti, G., Cerasoli, G., Di Giacinti, M., Coacci, S., Francucci, N., Petrelli, F., Ambrosio, G. B., & Grinta, R. G. (2024). Changes in body weight and composition, metabolic parameters, and quality of life in patients with type 2 diabetes treated with subcutaneous semaglutide in real-world clinical practice. *Frontiers in Endocrinology, 15*, 1394506.

Pennington, B. W., Cummins, E., Chandler, A., & Fotheringham, J. (2025). Challenges in Modelling the Cost Effectiveness of Pharmacotherapies for Obesity. *PharmacoEconomics, 43*(10), 1171–1178.

Popoviciu, M. S., Reurean-Pintilei, D. V., Salmen, T., Rus, M., Ferician, A. C., Sava, C. N., Ardelean, A. I., Moroianu, L. A., & Pantea Stoian, A. M. (2025). Translating Guidelines into Practice: A Prospective Real-World Study of a Romanian Cohort Treated with GLP-1 RAs. *Biomedicines, 13*(9), 2174.

Powell, W., Song, X., Mohamed, Y., Walsh, D., Parks, E. J., McMahon, T. M., Khan, M., & Waitman, L. R. (2023). Medications and conditions associated with weight loss in patients prescribed semaglutide based on real-world data. *Obesity, 31*(10), 2482–2492.

Quddos, F., Hubshman, Z., Tegge, A. N., Sane, D., Marti, E., Kablinger, A. S., Gatchalian, K. M., Kelly, A. L., DiFeliceantonio, A. G., & Bickel, W. K. (2023). Semaglutide and Tirzepatide reduce alcohol consumption in individuals with obesity. *Scientific Reports, 13*(1), 20997.

Rajamand-Ekberg, N., Bodholdt, U., Catarig, A. M., Catrina, S. B., Grau, K., Holmberg, C. N., Klanger, B., & Knudsen, S. T. T. (2021). Real-world use of once-weekly semaglutide in patients with type 2 diabetes: Results from the SURE Denmark/Sweden multicentre, prospective, observational study. *Primary Care Diabetes, 15*(5), 871–878.

Richards, R., Wren, G. M., & Campion, P. (2023). A Remotely Delivered, Semaglutide-Supported Specialist Weight Management Program: Preliminary Findings From a Retrospective Service Evaluation. *JMIR Formative Research, 7*(1), e53619.

Richards, R., Whitman, M., Wren, G. M., & Campion, P. (2025). A Remotely Delivered GLP-1RA–Supported Specialist Weight Management Program in Adults Living With Obesity: Retrospective Service Evaluation. *JMIR Formative Research, 9*, e72577.

Ruan, Z., Jiang, Y., Shi, H., Jia, R., Ung, C. O. L., & Hu, H. (2023). Real-world clinical effectiveness of once-weekly semaglutide in patients with type 2 diabetes: a systematic literature review. *Expert Review of Clinical Pharmacology, 16*(2), 161–176.

Rudofsky, G., Amadid, H., Braae, U. C., Catrina, S. B., Kick, A., Mandavya, K., Roslind, K., Saravanan, P., van Houtum, W. H., & Jain, A. B. (2025). Oral Semaglutide Use in Type 2 Diabetes: A Pooled Analysis of Clinical and Patient-Reported Outcomes from Seven PIONEER REAL Prospective Real-World Studies. *Diabetes Therapy, 16*(1), 73–87.

Rudofsky, G., Menzen, M., Potier, L., Catarig, A. M., Clark, A. J., Priyadarshini, P., & Abreu, C. P. (2025). Glucagon-Like Peptide-1 Receptor Agonist-Experienced Adults with Type 2 Diabetes Switching to Once-Weekly Semaglutide in a Real-World Setting: SURE Program Post Hoc Analysis. *Advances in Therapy, 42*(2), 788–800.

Samuels, J. M., Ye, F., Irlmeier, R. T., Silver, H. J., Srivastava, G., & Spann, M. D. (2025). Real-world titration, persistence & weight loss of semaglutide and tirzepatide in an academic obesity clinic. *Diabetes, Obesity and Metabolism, 27*(11), 6200–6209.

Saravanan, P., Bell, H. E., Braae, U. C., Collins, E., Deinega, A., Dhatariya, K. K., Machell, A., Trent, A., & Strzelecka, A. (2024). PIONEER REAL UK: A Multi-Centre, Prospective, Real-World Study of Once-Daily Oral Semaglutide Use in Adults with Type 2 Diabetes. *Advances in Therapy, 41*(11), 4266–4281.

Sato, G., Uchino, H., & Hirose, T. (2024). Efficacy and Safety of Escalating the Dose of Oral Semaglutide from 7 to 14 mg: A Single-Center, Retrospective Observational Study. *Diabetes Therapy, 15*(9), 2119–2130.

Schnell, O., Battelino, T., Bergenstal, R. M., Birkenfeld, A. L., Ceriello, A., Cheng, A. Y. Y., ... & Standl, E. (2023). CVOT Summit 2022 Report: new cardiovascular, kidney, and glycemic outcomes. *Cardiovascular Diabetology, 22*(1), 73.

Seier, S., Stamp-Larsen, K., Jensen, S. B. K., Torekov, S. S., & Gudbergsen, H. (2025). Treat to target in weight management with semaglutide: Real-world evidence from an eHealth clinic. *Diabetes, Obesity and Metabolism*.

Serpa-Díaz, D., Llanos-Florez, C. A., Uribe, R. S., de Salazar, D. I. M., Giraldo-Gonzalez, G. C., Urina-Triana, M. A., Suarez-Rodriguez, A. F., & Alzate-Vinasco, M. A. (2024). Glycemic Control and Body Weight Reduction with Once-Weekly Semaglutide in Colombian Adults with Type 2 Diabetes: Findings from the COLIBRI Study. *Diabetes Therapy, 15*(6), 1451–1460.

Singh, A. K., Singh, R., Singh, A. K., & Misra, A. (2024). Efficacy and safety of oral semaglutide in type 2 diabetes: A systematic review of real-world evidence. *Diabetes and Metabolic Syndrome: Clinical Research and Reviews, 18*(5), 103024.

Tan, X., Divino, V., Amamoo, J. J., Xie, L., Coyle, K. B., Gamble, C. L., Guevarra, M., Paprocki, Y. M., & King, A. A. (2024). Real-World Effectiveness of Once-Weekly Glucagon-Like Peptide-1 Receptor Agonists (OW GLP-1RAs) in Comparison with Dipeptidyl Peptidase-4 Inhibitors (DPP-4is) for Glycemic Control and Weight Outcomes in Type 2 Diabetes Mellitus (RELATE). *Clinical Drug Investigation, 44*(4), 271–284.

Thomsen, R. W., Mailhac, A. C., Løhde, J. B., & Pottegård, A. (2025). Real-world evidence on the utilization, clinical and comparative effectiveness, and adverse effects of newer GLP-1RA-based weight-loss therapies. *Diabetes, Obesity and Metabolism, 27*(S2), 66–88.

Toliver, J. C., Divino, V., Ng, C. D., & Wang, J. (2025). Real-World Weight Loss Among Patients Initiating Semaglutide 2.4 mg and Enrolled in WeGoTogether, a Digital Self-Support Application. *Advances in Therapy, 42*(10), 5010–5022.

van Houtum, W. H., Schrömbges, P. P. G., Amadid, H., van Bon, A. C., Braae, U. C., Hoogstraten, C., & Herrings, H. (2024). Real-World Use of Oral Semaglutide in Adults with Type 2 Diabetes in the PIONEER REAL Netherlands Multicentre, Prospective, Observational Study. *Diabetes Therapy, 15*(8), 1749–1768.

Wolffenbuttel, B. H. R., Brugts, M. P., Catarig, A. M., Clark, A. J., Kok, M., Lieverse, A. G., & van Soest, J. (2023). Once-Weekly Semaglutide Use in Type 2 Diabetes: Real-World Data from the SURE Netherlands Observational Study. *Advances in Therapy, 40*(3), 920–933.

Yale, J. F., Bodholdt, U., Catarig, A. M., Catrina, S. B., Clark, A. J., Rajamand-Ekberg, N., ... & Rudofsky, G. (2022). Real-world use of once-weekly semaglutide in patients with type 2 diabetes: Pooled analysis of data from four SURE studies by baseline characteristic subgroups. *BMJ Open Diabetes Research and Care, 10*(2), e002619.

© 2025 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (http://creativecommons.org/licenses/by/4.0/).