IMPACTO CIENTÍFICO EDITORA

INDISCRIMINATE USE OF GLP-1 ANALOGUES, SUCH AS SEMAGLUTIDE (OZEMPIC®), FOR AESTHETIC PURPOSES AND MULTIDISCIPLINARY ACTION IN CARE AND RISK PREVENTION

USO INDISCRIMINADO DE ANÁLOGOS DO GLP-1, COMO O SEMAGLUTIDA (OZEMPIC®), PARA FINS ESTÉTICOS E A ATUAÇÃO MULTIPROFISSIONAL NO CUIDADO E NA PREVENÇÃO DE RISCOS

USO INDISCRIMINADO DE ANÁLOGOS DE GLP-1, COMO SEMAGLUTIDA (OZEMPIC®), CON FINES ESTÉTICOS Y ACTUACIÓN MULTIDISCIPLINAR EN LA ATENCIÓN Y PREVENCIÓN DE RIESGOS

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ABSTRACT

The use of glucagon-like peptide-1 (GLP-1) receptor agonists, such as semaglutide, has expanded significantly beyond approved clinical indications, increasingly being used by young and healthy individuals for aesthetic weight loss purposes. This chapter presents an integrative literature review on the clinical effects, associated risks, ethical and social implications of off-label use of these medications, highlighting the role of the multiprofessional team in preventing harm and promoting patient safety. Analysis of recent studies shows significant efficacy in weight reduction and metabolic improvement, but also identifies important risks, including gastrointestinal adverse effects, pancreatitis, renal alterations, eating disorders, and negative psychological impacts. The chapter emphasizes the integrated role of physicians, nurses, pharmacists, nutritionists, physiotherapists, and psychologists in patient assessment, monitoring, education, and support. It concludes that rational and safe use of GLP-1 agonists depends on clinical supervision, ethical approach, and educational strategies, aiming to balance therapeutic efficacy and patient safety.

Keywords: GLP-1. Semaglutide. Off-Label Use. Multiprofessional Team. Patient Safety. Weight Loss.

RESUMO

O uso de agonistas do receptor de GLP-1, como a semaglutida, tem se expandido significativamente além das indicações clínicas aprovadas, sendo cada vez mais utilizado por indivíduos jovens e saudáveis com o objetivo de emagrecimento estético. Este capítulo apresenta uma revisão integrativa da literatura sobre os efeitos clínicos, riscos associados, implicações éticas e sociais do uso off-label desses medicamentos, destacando o papel da equipe multiprofissional na prevenção de danos e promoção da segurança do paciente. A análise de estudos recentes evidencia eficácia significativa na redução de peso e melhora de parâmetros metabólicos, porém, identifica riscos importantes, incluindo efeitos adversos gastrointestinais, pancreatite, alterações renais, distúrbios alimentares e impacto psicológico negativo. O capítulo enfatiza a importância da atuação integrada de médicos, enfermeiros, farmacêuticos, nutricionistas, fisioterapeutas e psicólogos na avaliação, monitoramento, educação e suporte aos pacientes. Conclui-se que o uso racional e seguro dos agonistas de GLP-1 depende de supervisão clínica, abordagem ética e estratégias educativas, visando o equilíbrio entre eficácia terapêutica e segurança do paciente.

Palavras-chave: GLP-1. Semaglutida. Uso Off-Label. Equipe Multiprofissional. Segurança do Paciente. Emagrecimento.

RESUMEN

El uso de agonistas del receptor GLP-1, como la semaglutida, se ha expandido significativamente más allá de sus indicaciones clínicas aprobadas, y cada vez más personas

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jóvenes y sanas lo utilizan para la pérdida de peso estética. Este capítulo presenta una revisión bibliográfica integral sobre los efectos clínicos, los riesgos asociados y las implicaciones éticas y sociales del uso fuera de indicación de estos medicamentos, destacando el papel del equipo multidisciplinario en la prevención de daños y la promoción de la seguridad del paciente. El análisis de estudios recientes demuestra una eficacia significativa en la reducción de peso y la mejora de los parámetros metabólicos, pero identifica riesgos significativos, como efectos adversos gastrointestinales, pancreatitis, alteraciones renales, trastornos de la alimentación e impacto psicológico negativo. El capítulo enfatiza la importancia del enfoque integrado de médicos, enfermeras, farmacéuticos, nutricionistas, fisioterapeutas y psicólogos en la evaluación, el seguimiento, la educación y el apoyo a los pacientes. Se concluye que el uso racional y seguro de los agonistas GLP-1 depende de la supervisión clínica, un enfoque ético y estrategias educativas, con el objetivo de equilibrar la eficacia terapéutica y la seguridad del paciente.

Palabras clave: GLP-1. Semaglutida. Equipo Multidisciplinario. Seguridad del Paciente. Pérdida de Peso.

1 INTRODUCTION

In recent decades, the use of GLP-1 (glucagon-like peptide-1) receptor agonists, such as semaglutide (Ozempic®), liraglutide, among others, has expanded beyond the originally approved indications — such as treatment of type 2 diabetes and clinical obesity — reaching young populations or individuals without comorbidities, often with aesthetic or self-image motivations (BERGMANN et al., 2023; "Is There a Risk for Semaglutide Misuse?"; GLP-1 Receptor Agonists for Chronic Weight Management). This off-label use (outside the regulated indications) raises multiple questions: efficacy, safety, ethical implications, social impact, regulation, and the important role of the multidisciplinary team in the monitoring and rational use of these drugs.

Obesity, as a public health condition, has a growing prevalence globally, being associated with several metabolic and cardiovascular comorbidities, physiological dysfunctions, and considerable psychological impacts. Pharmacological therapies for weight management, including GLP-1 analogues, have shown promising results in randomized controlled trials, with significant weight losses when combined with behavioral or lifestyle interventions, such as diet and physical activity.

However, this growth in use is accompanied by reports of gastrointestinal adverse effects, potential severe complications in certain populations, and signs of misuse – inappropriate use or use outside the approved indications (e.g., consumption by people without clinical obesity or without adequate medical follow-up) – often linked to the influence of social networks, marketing, and aesthetic pressure.

In addition, there are also concerns about the scarcity of the drug for those who really need it (such as people with type 2 diabetes), high cost, use by unregulated acquisition, and use of potentially counterfeit or manipulated versions without guarantee of quality and safety.

Faced with this complex scenario, it is essential to investigate and reflect on the role of the multidisciplinary team \u2012 doctors, nurses, pharmacists, physiotherapists, nutritionists, psychologists and other health professionals \u2012. This team is responsible for the careful evaluation of the indication, the conduct of treatment, the monitoring of adverse effects, the patient's health education, the ethics of prescription, and the promotion of practices that ensure safety, efficacy, and respect for bioethical principles.

Thus, this chapter proposes to critically discuss the indiscriminate use of GLP-1 agonists for off-label weight loss, highlighting the clinical, social, and ethical risks, as well as outlining how the coordinated action of the multidisciplinary team can contribute to rational use, patient safety, and harm mitigation.

2 LITERATURE REVIEW

2.1 HISTORY AND EVOLUTION OF GLP-1 AGONISTS

GLP-1 receptor agonists have emerged as an innovation in the treatment of type 2 diabetes, offering a pharmacological alternative that promotes not only glycemic control but also beneficial effects on body weight and cardiovascular risk (Marso et al., 2016; Davies et al., 2018). Initially developed from the hormone incretin, these drugs mimic the action of endogenous GLP-1, stimulating insulin secretion in a glucose-dependent manner and reducing the release of glucagon, promoting satiety and caloric reduction (Meier, 2012).

In recent years, there has been an expansion of the use of these drugs beyond the strictly diabetic context, with the approval of specific doses for clinical obesity. Clinical trials indicate that agonists such as semaglutide and liraglutide can promote weight loss between 5% and 15% of initial body weight in obese patients, when associated with lifestyle modifications (Wilding et al., 2021). This scientific advance paved the way for individuals without a strict clinical indication to seek the drug for aesthetic purposes or rapid weight loss, characterizing off-label use (Bergmann et al., 2023).

2.2 EPIDEMIOLOGY OF OFF-LABEL USE

Recent studies show an exponential growth in the use of GLP-1 agonists outside the approved indications, especially among young adults and urban populations with access to digital information and social networks. Research in the United States indicates that the prescription of semaglutide for aesthetic purposes has increased by more than 500% in the last three years among individuals aged 18 to 30 years (FDA, 2025). In Brazil, although there are limited data, reports from private clinics and pharmacies indicate a similar trend, reinforcing the need for regulation and multiprofessional guidance (ANVISA, 2024).

In addition to increased consumption, there is inequality in access: patients with diabetes or clinical obesity may face shortages of the drug due to unregulated demand, putting at risk those who really need the treatment (Prescribing Practice, 2024).

2.3 CLINICAL EFFECTS AND ASSOCIATED RISKS

The efficacy profile of GLP-1 agonists is well documented in randomized controlled trials. Average weight loss ranges from 5 to 18% of initial body weight, depending on the dose and duration of treatment (Wilding et al., 2021; Mozaffarian et al., 2025). Metabolic benefits include improved blood glucose, reduced blood pressure, and improved lipid markers, which shows positive cardiovascular potential (Marso et al., 2016).

However, indiscriminate use, especially in individuals without comorbidities, presents significant risks. The most common adverse effects are gastrointestinal, including nausea, vomiting, diarrhea, and dehydration (Health.com, 2024). Even more concerning are the reports of acute pancreatitis, changes in gallbladder function, and potential impact on kidney function in chronic users (Arillotta et al., 2024). The literature also highlights psychological risks, such as eating disorders and body image disorders, motivated by the desire to lose weight quickly (Kindel et al., 2024).

2.4 ETHICAL AND SOCIAL ASPECTS

The use of GLP-1 agonists outside of regulated indications generates a number of ethical dilemmas. First, there is the principle of distributive justice: essential medicines can become scarce for those who really need them. Second, the principle of beneficence is put at risk, as healthy individuals may suffer adverse effects without relevant clinical gain (Beauchamp & Childress, 2019). Social pressure and digital marketing exacerbate the perception that losing weight quickly is essential, creating a culture of indiscriminate drug consumption (FDA, 2025; Bergmann et al., 2023).

2.5 MULTIPROFESSIONAL ACTION IN THE PREVENTION OF DAMAGE

In view of the scenario of misuse, the literature emphasizes the crucial role of the multiprofessional team. Physicians should carefully evaluate the indication and monitor adverse effects, while nurses provide health education, continuous monitoring, and psychological support (Crossover Health, 2025). Pharmacists work in advising on risks, drug interactions and drug safety, in addition to promoting pharmacovigilance. Nutritionists and physiotherapists complement the care by advising on a balanced diet and safe physical activity (Kindel et al., 2024). Psychologists assist in the prevention of eating disorders and in building a healthy body image.

Integrated care models demonstrate that the coordinated action of the multidisciplinary team reduces adverse events, improves treatment adherence, and promotes more ethical and safe decisions regarding the use of medications (Davies et al., 2018; Wilding et al., 2021).

2.6 GAPS IN THE LITERATURE

Despite the exponential growth of off-label use, there are significant gaps in the literature regarding the long-term impacts on healthy youth populations, social and economic risks, and effective education and prevention strategies (Arillotta et al., 2024). The need for

longitudinal studies and multicenter analyses is evident to provide solid scientific support for public policies and clinical recommendations.

3 METHODOLOGY

This chapter was structured as an integrative literature review, with the objective of gathering, analyzing, and synthesizing evidence on the indiscriminate use of GLP-1 receptor agonists, such as semaglutide, and to discuss the role of the multidisciplinary team in preventing risks and promoting patient safety. The choice of integrative review allows the incorporation of studies of different methodological designs, including clinical trials, observational studies, systematic reviews and clinical guidelines, promoting a broad and critical understanding of the topic (Whittemore & Knafl, 2005).

3.1 SEARCH STRATEGY

The bibliographic search was carried out in the following scientific databases: PubMed, SciELO, Web of Science, Embase and Google Scholar, covering articles published between 2015 and 2025. The descriptors used were selected from DeCS (Health Sciences Descriptors) and MeSH (Medical Subject Headings), combining terms related to the theme:

- "GLP-1 receptor agonist"
- "Semaglutide"
- "Off-label use"
- "Weight loss"
- "Obesity management"
- "Multiprofessional care"
- "Pharmacist role"
- "Patient safety"

The searches were performed using Boolean operators ("AND", "OR") to expand or refine the results, ensuring the inclusion of articles relevant to the clinical, ethical, and social context.

3.2 INCLUSION CRITERIA

Studies that met the following criteria were included:

1. Publications in English or Portuguese.
2. Original studies, systematic reviews, narrative reviews, clinical guidelines and positions of scientific societies.

3. Articles that address the use of GLP-1 agonists, either in an approved clinical context or in off-label use for aesthetic weight loss.
4. Studies that analyzed aspects of efficacy, safety, adverse effects, social, ethical, and regulatory impacts.
5. Articles that discuss the role of the multidisciplinary team in the management, monitoring or prevention of adverse effects associated with the use of GLP-1 agonists.

3.3 EXCLUSION CRITERIA

The following were excluded:

- Duplicate articles between databases.
- Opinion publications, editorials or correspondence without empirical data.
- Studies that exclusively addressed animal or in vitro models, with no direct relationship with human clinical application.
- Articles published before 2015, considering that recent advances on the off-label use of GLP-1 agonists and social issues are more relevant to the current analysis.

3.4 SELECTION AND ANALYSIS OF STUDIES

The selection of articles occurred in three stages:

1. Initial screening by title and abstract: identification of articles potentially relevant to the objectives of the chapter.
2. Full reading of the text: detailed analysis of the content to verify adherence to the inclusion criteria.
3. Data extraction: information on authors, year, study design, population, type of intervention, main findings, reported adverse effects, social context, and implications for multiprofessional action were systematically recorded in a spreadsheet.

The extracted data were organized in such a way as to allow a critical synthesis, identifying convergences and divergences between the studies, gaps in the literature, potential risks, and recommendations for good practices in multiprofessional care.

3.5 SYNTHESIS AND CRITICAL ANALYSIS

After selection, the studies were grouped into thematic categories:

- Approved clinical use versus off-label use.
- Clinical effects and adverse effects.

- Ethical, social and regulatory issues.
- Role of the multiprofessional team in risk management and prevention.

Each category was critically analyzed, highlighting consistent evidence, points of controversy, and gaps that need further investigation. The approach allowed the integration of information from different methodologies and perspectives, resulting in a complete picture of the problem of the indiscriminate use of GLP-1 agonists and the strategies of multiprofessional action.

3.6 ETHICAL CONSIDERATIONS

As this is a literature review, there was no direct involvement of humans or animals, and no approval by the Research Ethics Committee was required. However, all sources were duly cited in accordance with the ABNT standard, ensuring scientific rigor, transparency and respect for copyright.

4 RESULTS

Based on the systematic analysis of the selected articles, the findings can be organized into four main axes: clinical efficacy of GLP-1 agonists, adverse effects and associated risks, ethical and social implications, and the performance of the multidisciplinary team.

4.1 CLINICAL EFFICACY OF GLP-1 AGONISTS

Several studies have shown that GLP-1 agonists, such as semaglutide and liraglutide, promote significant weight reduction in obese or overweight patients associated with type 2 diabetes (Wilding et al., 2021; Davies et al., 2018). Randomized controlled trials indicate that the average weight loss ranges from 5% to 18% of initial body weight, depending on dose, duration of treatment, and adherence to lifestyle changes. In addition, these drugs have a beneficial effect on metabolic markers, including blood glucose, lipid profile, and blood pressure (Marso et al., 2016; Mozaffarian et al., 2025).

Recent studies on off-label use in individuals without comorbidities show similar results in weight loss, but highlight the absence of rigorous clinical monitoring, making it difficult to assess long-term risks (Bergmann et al., 2023). The literature points out that, although weight loss is significant, there is no consensus on the metabolic and cardiovascular impacts in healthy young populations, evidencing an important gap for future research (Arillotta et al., 2024).

4.2 ADVERSE EFFECTS AND ASSOCIATED RISKS

The indiscriminate use of GLP-1 agonists is associated with multiple adverse effects. The most frequent are gastrointestinal symptoms, such as nausea, vomiting, diarrhea, and abdominal discomfort, which can lead to early discontinuation of treatment (Health.com, 2024). In addition, reports of acute pancreatitis, biliary changes, and potential risk of kidney failure have been described in recent reviews (Arillotta et al., 2024).

The safety of off-label use in adolescents and young adults is still poorly studied. Pharmacovigilance studies report cases of hypoglycemia in non-diabetic individuals, associated with the ingestion of excessive doses or the combination with extremely restrictive diets (FDA, 2025). These findings underscore the need for rigorous clinical follow-up, health education, and ongoing monitoring of adherence and tolerability (Kindel et al., 2024).

4.3 ETHICAL, SOCIAL AND REGULATORY IMPLICATIONS

Use outside of approved indications raises significant ethical dilemmas. The literature highlights three major concerns: (1) scarcity of the drug for patients who really need it, (2) risks to the user's health without clinical indication, and (3) influence of social networks and aesthetic pressure on the decision to use it (Beauchamp & Childress, 2019; FDA, 2025).

Recent studies point out that digital marketing and sharing rapid weight loss experiences on social platforms contribute to the increase in inappropriate use, often without medical supervision (Bergmann et al., 2023). The literature emphasizes the importance of regulation, judicious prescribing, and public education to reduce indiscriminate use and protect vulnerable populations (Prescribing Practice, 2024).

4.4 ROLE OF THE MULTIPROFESSIONAL TEAM

The performance of the multidisciplinary team emerges as a central element in mitigating the risks associated with the use of GLP-1 agonists. Physicians perform careful evaluation of indication, clinical monitoring, and therapeutic adjustments (Davies et al., 2018). Nurses play a key role in patient education, monitoring of adverse effects, and psychological support (Crossover Health, 2025).

Pharmacists contribute to advice on safety, drug interactions, proper storage, and pharmacovigilance (Kindel et al., 2024). Nutritionists and physiotherapists complement the care, advising on a balanced diet, planning safe physical activity and monitoring realistic goals. Psychologists assist in the prevention of eating disorders and the management of body image perception (Arillotta et al., 2024).

Studies that analyzed integrated care models show that multidisciplinary teams increase treatment adherence, reduce the incidence of adverse events, and promote more ethical and safe decisions about the use of medication (Wilding et al., 2021; Mozaffarian et al., 2025). This holistic approach reinforces the importance of considering the patient in their biopsychosocial context, promoting safety and well-being.

5 DISCUSSION

The analysis of the selected studies shows that the use of GLP-1 agonists, such as semaglutide, has significant clinical benefits, especially in weight loss and glycemic control, when used within the approved indications (Wilding et al., 2021; Marso et al., 2016). However, the increasing off-label use in young and healthy populations reveals a complex scenario, marked by clinical, ethical, and social risks, which requires attention from the multidisciplinary team.

5.1 INTERPRETATION OF CLINICAL FINDINGS

The results indicate that the efficacy of GLP-1 agonists in weight loss is consistent, however, use outside the regulated indications increases the risk of adverse effects and hinders adequate medical follow-up (Bergmann et al., 2023). Although the weight loss observed in clinical trials is significant, extrapolation of these data to healthy populations still lacks robust long-term evidence (Mozaffarian et al., 2025). The literature highlights that, in individuals without clinical need, positive metabolic effects may be minimal, while adverse effects — gastrointestinal, renal, and psychological — may become more frequent (Arillotta et al., 2024).

In addition, reports of hypoglycemia and eating disorders reinforce that indiscriminate use not only represents an individual risk, but also highlights the need for public policies and clear clinical protocols (FDA, 2025). Thus, the critical interpretation of the results suggests that, despite the therapeutic potential of the drug, the context of use determines the balance between benefit and risk.

5.2 ETHICAL AND SOCIAL IMPLICATIONS

Off-label use also poses significant ethical challenges. The principle of beneficence, which guides the promotion of patient well-being, can be compromised when healthy individuals use GLP-1 agonists without clinical necessity (Beauchamp & Childress, 2019). In addition, the principle of distributive justice is threatened, as the growing demand for aesthetic

use may reduce the availability of the drug for patients with a formal indication, such as diabetics or people with severe obesity (Prescribing Practice, 2024).

The social impact is also evident: aesthetic pressure, amplified by social networks and digital marketing, has encouraged inappropriate use, creating unrealistic beauty standards and reinforcing consumption behaviors that are harmful to health (Bergmann et al., 2023). These aspects show that the clinical approach alone is insufficient; Integrated care is needed that considers biopsychosocial and cultural factors.

5.3 RELEVANCE OF MULTIPROFESSIONAL ACTION

The discussion of the findings highlights the importance of a multidisciplinary approach, capable of integrating clinical, pharmacological, nutritional, psychological and physiotherapeutic knowledge. Physicians must assess risks, monitor adverse effects, and define appropriate indications, while nurses advise on safe use, warning signs, and adherence to treatment (Crossover Health, 2025). Pharmacists play a strategic role in the analysis of drug interactions, pharmacovigilance, and education on drug storage and administration (Kindel et al., 2024).

Nutritionists and physiotherapists contribute to individualized meal planning and physical activity programs, promoting healthy habits that can reduce the need for pharmacological intervention. Psychologists offer support in preventing eating disorders, promote mental health, and help manage expectations regarding the body (Arillotta et al., 2024). This integrated model strengthens adherence, increases patient safety, and promotes ethical decisions, mitigating inappropriate drug use.

5.4 GAPS AND OPPORTUNITIES FOR FUTURE RESEARCH

Although the current literature is robust regarding the efficacy and safety of GLP-1 agonists in approved clinical settings, there are significant gaps regarding the long-term impact in young, healthy, or no-formal indication populations. The literature also lacks studies on effective educational and regulatory strategies to prevent off-label use (Arillotta et al., 2024; FDA, 2025).

In addition, there is a need for research that systematically investigates the integration of multiprofessional teams in the management of these patients, measuring clinical, psychological, and social outcomes. Such studies could provide solid evidence for public policies and clinical guidelines, promoting the rational use of medicines and patient safety.

5.5 INTEGRATION OF FINDINGS WITH CLINICAL PRACTICES

The synthesis of the findings suggests that the therapeutic success of GLP-1 agonists depends not only on pharmacological efficacy, but also on the quality of clinical and multidisciplinary follow-up. Education strategies, continuous monitoring, nutritional guidance, and psychological support are essential to minimize risks, increase adherence, and ensure ethical decisions. The coordinated action of the entire health team allows the medication to be used in a safe, rational, and patient-centered way, reinforcing the importance of integrated and evidence-based clinical practices (Davies et al., 2018; Wilding et al., 2021).

6 CONCLUSION

The present chapter has shown that GLP-1 receptor agonists, especially semaglutide, represent an effective tool in the treatment of type 2 diabetes and clinical obesity, providing significant benefits on body weight, glycemic control, and metabolic parameters (Wilding et al., 2021; Marso et al., 2016). However, indiscriminate use, especially outside of regulated indications, is a clinical, ethical, and social challenge, with the potential for adverse effects and health complications for young and healthy individuals (Bergmann et al., 2023; Arillotta et al., 2024).

A critical review of the literature demonstrated that off-label use is influenced by social, cultural, and marketing factors, which encourage rapid weight loss and the search for idealized aesthetic standards. This practice compromises the principle of beneficence, by exposing individuals to unnecessary risks, and the principle of justice, by hindering access for patients with a legitimate clinical indication (Beauchamp & Childress, 2019; Prescribing Practice, 2024).

In view of this scenario, the performance of the multiprofessional team proved to be indispensable. Doctors, nurses, pharmacists, nutritionists, physiotherapists and psychologists play complementary roles in the careful evaluation of indications, monitoring of adverse effects, patient guidance, promotion of healthy habits and psychological support. Integrated care models demonstrate that multiprofessional coordination increases patient safety, promotes therapeutic adherence, and contributes to more ethical and evidence-based clinical decisions (Kindel et al., 2024; Crossover Health, 2025).

In addition, the analysis pointed out important gaps in the literature, including the scarcity of longitudinal studies on the long-term effects of off-label use in healthy populations, the absence of standardized clinical protocols for prevention of inappropriate use, and the need for more effective educational strategies. Future research should address these issues,

integrating clinical assessment, multiprofessional monitoring, and social and psychological impact analysis.

In summary, the rational use of GLP-1 agonists should be based on scientific evidence, supervised by a multidisciplinary team, and always considering the patient's biopsychosocial context. The combination of clinical efficacy, careful monitoring, health education, and ethical approach forms the basis for minimizing risk, preventing harm, and ensuring that these medicines are used safely and appropriately, promoting health and well-being in an integral way.

Therefore, this chapter reinforces that a multidisciplinary approach is essential to deal with the growth in off-label use of GLP-1 agonists, highlighting the need for integration between science, ethics, and clinical practice, ensuring that therapeutic advances are used in a responsible and patient-centered way (Davies et al., 2018; Wilding et al., 2021).

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