

Obesity Facts

Obes Facts , DOI: 10.1159/000544880

Received: October 15, 2024

Accepted: February 11, 2025

Published online: March 29, 2025

The Spanish GIRO guideline: a paradigm shift in the management of obesity in adults.

Lecube A, Azriel S, Barreiro E, Blay G, Carretero-Gómez J, Ciudin A, Fernández JM, Flores L, de Hollanda A, Martínez E, Miñambres I, Moize V, Morales C, Ramírez V, Salvador J, Soler MJ, Supervía M, Valentí V, Vicente-Rodríguez G, Vilarrasa N, Malagón MM

ISSN: 1662-4025 (Print), eISSN: 1662-4033 (Online)

<https://www.karger.com/OFA>

Obesity Facts

Disclaimer:

Accepted, unedited article not yet assigned to an issue. The statements, opinions and data contained in this publication are solely those of the individual authors and contributors and not of the publisher and the editor(s). The publisher and the editor(s) disclaim responsibility for any injury to persons or property resulting from any ideas, methods, instructions or products referred to the content.

Copyright:

This article is licensed under the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC) (<http://www.karger.com/Services/OpenAccessLicense>). Usage and distribution for commercial purposes requires written permission.

© 2025 The Author(s). Published by S. Karger AG, Basel

Research Article

Title: The Spanish GIRO guideline: a paradigm shift in the management of obesity in adults.

Authors: Albert Lecube^{a,b#}, Sharona Azriel^{b,c}, Esther Barreiro^d, Guadalupe Blay^e, Juana Carretero-Gómez^f, Andreea Ciudin^{b,g,h}, José Manuel Fernándezⁱ, Lilliam Flores^{b,j}, Ana de Hollanda^{i,k,l}, Eva Martínez^m, Inka Miñambres^{l,n}, Violeta Moizé^{j,o}, Cristóbal Morales^{b,p}, Violeta Ramírez^q, Javier Salvador^{k,l,r}, María José Soler^s, Marta Supervía^{t,u}, Víctor Valentí^v, Germán Vicente-Rodríguez^{l,w}, Nuria Vilarrasa^{k,l,x} and María M. Malagón^{b,l,y#}

^aEndocrinology and Nutrition Department, Obesity Unit, Arnau de Vilanova University Hospital in Lleida, *Institut de Recerca Biomèdica (IRB) de Lleida*, University of Lleida. Lleida, Spain.

^bSpanish Society for the Study of Obesity (SEEDO).

^cDepartment of Endocrinology and Nutrition, Infanta Sofia University Hospital, Faculty of Biomedical and Health Sciences, *Universidad Europea de Madrid*. Madrid, Spain.

^dSpanish Society of Pneumology and Thoracic Surgery (SEPAR); Pulmonary Department, Hospital del Mar, Department of Medicine and Life Sciences (MELIS), *Universitat Pompeu Fabra*; Muscle Wasting and Cachexia in Chronic Respiratory Diseases and Lung Cancer Research Group, Hospital del Mar Research Institute (IMIM), Barcelona, Spain; *Centro de Investigación en Red de Enfermedades Respiratorias (CIBERes)*, *Instituto de Salud Carlos III (ISCIII)*. Barcelona, Spain.

^eSpanish Society of General and Family Doctors (SEMG); *Centro de Atención Temprana y Discapacidad (CATI)*. *Instituto Aragonés de Servicios Sociales (IASS)*. Zaragoza, Spain.

^fSpanish Society of Internal Medicine (SEMI); Internal Medicine Department, *Hospital Universitario de Badajoz*. Badajoz, Spain.

^gEndocrinology and Nutrition Department, Obesity Unit, *Hospital Universitari Vall d'Hebrón*; Vall d'Hebron Research Institute; Autonomous University of Barcelona. Barcelona, Spain.

^h*Centro de Investigación en Red en Diabetes y Enfermedades Metabólicas (CIBERdem)*, *ISCIII*. Madrid, Spain.

ⁱSpanish Society of Primary Care Physicians (SEMergen), *Medicina Familiar y Comunitaria. C.S. de Valga, Área Sanitaria de Santiago de Compostela*. Santiago de Compostela, Spain.

^jEndocrinology and Nutrition Department, Obesity Unit, *Hospital Clínic Barcelona*. Barcelona, Spain.

^kSpanish Society of Endocrinology and Nutrition (SEEN).

^l*Centro de Investigación en Red de Fisiopatología de la Obesidad y Nutrición (CIBERObn)*, *ISCIII*. Madrid, Spain.

^mSpanish Society of Clinical Nutrition and Metabolism (SENPE); Hospital Germans Trias i Pujol. Barcelona, Spain.

ⁿSpanish Diabetes Society (SED); Endocrinology and Nutrition Department, Obesity Unit, Sant Pau i Santa Creu University Hospital. Barcelona, Spain.

^oSpanish Scientific Society of Dietetics and Nutrition (SEDYN).

^pEndocrinology and Nutrition Department, Vithas Hospital. Sevilla, Spain.

^qSpanish Society of Family and Community Medicine (semFYC), *Hospital Comarcal de Inca*. Inca, Spain.

^rFaculty of Medicine, University of Navarra. Pamplona, Spain.

^sSpanish Society of Nephrology (SEN); Nephrology Department, Vall d'Hebron University Hospital; Vall d'Hebron Research Institute. Barcelona, Spain.

^tSpanish Society of Rehabilitation and Physical Medicine (SERMEF); Gregorio Marañón Health Research Institute, Gregorio Marañón General University Hospital. Madrid, Spain.

^uCardiovascular Diseases Department, Mayo Clinic. Rochester, Minnesota, USA

^vSpanish Society of Obesity and Metabolic Surgery (SECO); Obesity and Adipobiology Group, *Instituto de Investigación Sanitaria de Navarra* (IdiSNA); Department of Surgery, Clínica Universidad de Navarra. Pamplona, Spain.

^wEXER-GENUD (Growth, Exercise, NUtrition and Development) research group (S72_23R), FIMS Collaborating Center of Sports Medicine; *Instituto Agroalimentario de Aragón -IA2-* (CITA-Universidad de Zaragoza); Exercise and Health Spanish Research Network (EXERNET); Faculty of Health and Sport Science (FCSD, Ronda Misericordia 5, 22001-Huesca, Spain), Department of Physiatry and Nursing, University of Zaragoza. Zaragoza, Spain.

^xEndocrinology and Nutrition Department, Obesity Unit, Bellvitge University Hospital-IDIBELL. Bellvitge, Spain.

^y*Instituto Maimónides de Investigación Biomédica de Córdoba* (IMBIC), University of Córdoba, Reina Sofía University Hospital. Córdoba, Spain.

[#]Co-corresponding authors.

Running Title: GIRO, the Spanish guideline for the management of adult obesity.

Corresponding authors:

Albert Lecube, M.D., Ph.D

Endocrinology and Nutrition Department, University Hospital Arnau de Vilanova Obesity, Diabetes and Metabolism (ODIM) research group, IRB Lleida.

Avda. Rovira Roure 80. 25198, Lleida, Spain.

+34 973 70 51 83

Fax: +34 973 70 51 89

alecube@gmail.com

María M. Malagón

Instituto Maimónides de Investigación Biomédica de Córdoba (IMIBIC)/Universidad de Córdoba/Hospital Universitario Reina Sofía, Avda. Menéndez Pidal s/n, 14004-Córdoba, Spain.

+34 607 971 057

bc1mapom@uco.es

Keywords: Obesity, adults, guideline, Spain, recommendations, adipose tissue

Word count: 3.319 words

Accepted Manuscript

ABSTRACT

Introduction: Current obesogenic environments, along with intrinsic factors, contribute to the obesity pandemic, which impacts the quality of life and healthcare for individuals with obesity. In addition, discrimination and stigma related to obesity remain widespread in our society. In this scenario, the Spanish Society for the Study of Obesity (SEEDO), in collaboration with 38 recognized scientific societies and 12 patients' organisation, have elaborated the Spanish guideline for obesity management in adults, referred to as the GIRO guideline. GIRO aims to drive a shift in obesity management and serve as a guide for healthcare professionals (HCPs) to address this chronic and multifactorial disease. **Methods:** A comprehensive systematic review was conducted and completed with experts' contribution, with a particular focus on Spanish society. The quality of evidence was assessed using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) system. Experts selected the recommendations and determined their strength through consensus. **Results:** A total of 121 recommendations were proposed, including 32 adopted from the Canadian Adult Obesity Clinical Practice Guidelines and 89 specific recommendations created for the Spanish context, distributed across five areas of application: 1) Recognition of obesity as a chronic disease; 2) Obesity assessment; 3) Multidisciplinary approach to obesity treatment; 4) Recommendations for obesity management in special populations; and 5) Implementation of the GIRO guideline and future challenges. **Conclusion:** The GIRO recommendations are intended to serve as a useful and interactive tool for HCPs, policymakers and other stakeholders to ensure access to and quality of healthcare for individuals living with obesity.

INTRODUCTION

The prevalence of obesity in Spain has been steadily increasing in recent decades. Current data indicates that 18,7% of the adult Spanish population lives with obesity (19.3% of men and 18.0% of women) [1], with significant implications for healthcare cost [2, 3]. Obesogenic environments favouring the consumption of unhealthy, energy-dense diets and sedentary lifestyles, together with genetic, socio-economic, and psychological factors, among others, contribute to the obesity pandemics yet the relative importance of contributing factors may vary between individuals [4, 5]. Obesity cannot be regarded as a moral issue or limited to a lifestyle problem, and it is essential to ensure the absence of inequity or discrimination in the healthcare management of obesity. Prejudices and stigma related to obesity affect the quality of life (QoL) of both people with obesity (PwO) and their environment and, importantly, the quality of the healthcare that they receive [6-8]. In sum, it is imperative to drive a paradigm shift to address obesity as a chronic, relapsing, and multifactorial disease that requires personalized therapies [7]. In this scenario, herein we present the GIRO guideline (*“Guía española del manejo Integral y multidisciplinAR de la Obesidad en personas adultas”*), which has been created in response to this need, and with the aim of being a transformative tool for clinical practice in Spain. GIRO (or *shift* in Spanish) comprises the most recent and relevant evidence about the management and treatment of obesity in adults and provides clear messages about the changes that need to be implemented in clinical practice to do a 360°- turn to obesity concept and management. Specifically, the Spanish Society for the Study of Obesity (SEEDO, *“Sociedad Española para el Estudio de la Obesidad”*), together with 34 additional scientific societies directly involved in the prevention, diagnosis, and treatment of obesity, and in collaboration with 12 patient associations, have developed an updated, multidisciplinary, and all-inclusive guideline on obesity management. The Canadian Adult Obesity Clinical Practice Guidelines (CPGs) were used as a starting point, together with novel published evidence specially adapted to the Spanish healthcare context [9]. A total of 112 recommendations were established to guide the management and treatment of obesity in adults in the short and long term.

The target audience for this guideline are not only healthcare professionals (HCPs) involved in the management of obesity, but also PwO, their families and caregivers. The GIRO guideline could be also useful for policymakers, legislators, and government agencies as a base document for decision-making and administration of resources for obesity care.

METHODS

The GIRO Guideline has been promoted by SEEDO and initially developed in collaboration with a Multidisciplinary Committee (MC) of experts from 13 recognized scientific societies involved in obesity management in Spain. Additionally, PwO from the National Bariatric Association Hispalis (AB Hispalis) participated in the review process, except for the information and recommendations related to pharmacological treatment. In a second round, 25 additional scientific societies and 11 patient associations joined the project, further expanding its collaborative network (see the **Acknowledgement section** for details). Independent methodological and administrative experts also reviewed, updated, and adopted the Canadian CPGs' recommendations to the Spanish healthcare context.

Selection of topics

The panel of experts convened in two consecutive online meetings (November and December 2022) to define the scope and areas of application (referred to as Sections in **Supplementary Table 1**) as follows: 1) epidemiology and recognition of obesity as a chronic disease; 2) evaluation of obesity and body composition; 3) treatments currently available for PwO; 4) management recommendations for special populations with obesity; and 5) unmet needs and future challenges for GIRO implementation in clinical practice.

Scientific literature review

The bibliographic search was approached from three perspectives: first, information from the Canadian CPG was reviewed, and only content applicable to the Spanish healthcare setting was included in GIRO. Secondly, a systematic literature search was conducted in PubMed to update the contents of the Canadian CPGs and to gather all relevant evidence for developing novel recommendations tailored to the Spanish framework. The search criteria were based on PICO questions using MeSH terms to identify high-quality publications (clinical trials, meta-analyses, and systematic reviews) relevant to Spain from the past five years (2017-2022). The primary

search query was: ((obesity) AND (Spain) NOT ((overweight [Title/Abstract]) OR (child* [Title/Abstract]))). Alternative queries were used to ensure the likelihood of including all relevant articles. A total of 102 articles were identified, reviewed to eliminate duplicates, and screened based on title and abstract. From this pool, the experts selected articles that met the research objectives. After the final selection, 71 new articles were included in the data-extraction process. Thirdly, experts suggested and provided additional relevant publications. In total, 25 further publications deemed relevant to obesity management in Spain were incorporated into the qualitative synthesis, particularly in the introduction and Sections 4 and 5, which address specific patient populations and unmet needs and challenges, respectively.

Development of recommendations and quality of evidence

The panel of experts identified recommendations from the Canadian CPGs that could be directly transferred to the Spanish context without modifications, with their quality assessed using the AGREE II tool method [10]. Of the 80 recommendations from the Canadian GPCs, 32 were deemed suitable for adoption without content changes. The original coding system was retained to preserve the methodological integrity of the recommendations. Next, the panel developed 89 new recommendations tailored to obesity management in Spain, based on the evidence gathered in the literature. The quality of this evidence was evaluated using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) system, which was considered the most appropriate framework for assessing the new recommendations in GIRO [11]. The experts reached a consensus on the description and strength of each recommendation. The GIRO guideline was publicly presented on March 4th, 2024, coinciding with World Obesity Day, and is available at: <https://www.seedo.es/index.php/guia-giro> [12].

RESULTS

As indicated, the GIRO guideline includes a total of 121 recommendations, with 89 specifically designed for the Spanish context along with 32 original recommendations from the Canadian CPGs, (See **Supplementary Table 1**), which were distributed along the five sections of the GIRO guideline. Each section was accompanied by a set of final conclusions that summarized the main proposals offered by GIRO, as follows:

Section 1. Recognition of obesity as a chronic disease

1.1 The concept of obesity must be redefined to eradicate the traditional simplistic recommendation of “eat less and move more” [6, 7, 13]. Obesity is a chronic, complex, relapsing disease that increases the risk of developing multiple conditions and reduces both quality of life and life expectancy [2, 6, 7, 13].

1.2 Obesity is a significant public health issue, not only because of its negative impact on physical and psychological health, including increased mortality risk, but also for the substantial costs to the healthcare system [2, 6-8].

1.3 Biased beliefs about obesity impact the quality of healthcare received by PwO, who often face prejudice and stigma related to body weight. HCPs may use stigmatising language and behaviour regarding weight, which can discourage patients from seeking treatment or engaging with the healthcare system [6, 7, 13]. There is a need for educational, regulatory, and legal initiatives aimed at eliminating weight-related stigma and discrimination [8, 14]. It is also essential to provide education and training to HCPs, enabling them to recognize and address their own biases related to obesity and their understanding of the biological and socioeconomic factors influencing obesity for proper management and treatment [3, 15-18].

Section 2. Evaluation of obesity as a chronic disease

2.1 Obesity diagnosis should be based on a comprehensive morphofunctional evaluation comprising the patient’s clinical history and complementary studies. This evaluation should include anthropometric and body composition measurements, along with an assessment of potential contributing factors, complications, comorbidities, and barriers to treatment. The traditional, simplistic approach based solely on body mass index (BMI) should be definitely surpassed, moving towards the concept of “obesities” instead of “obesity”, a new term that encompasses the diverse phenotypes of obesity reported in the literature [4, 5, 19, 20].

2.2 Professionals must recognize the limitations of BMI-based assessment in daily clinical practice since: i) it is not a direct measure of body fat; ii) patients may have a normal BMI but a high percentage of body fat; iii) it does not

differentiate between visceral and subcutaneous adipose tissue; iv) it underestimates body fat in individuals with sarcopenic obesity and overestimates it in those with greater muscle mass; v) it does not discriminate by sex, age, or ethnic groups; and vi) it fosters social stigma by perpetuating misconceptions about the link between body size and societal issues related to obesity, such as the economic impact on healthcare [4, 19, 21, 22].

2.3 HCPs should implement strategies in routine clinical practice to address obesity properly with patients and enhance communication using well-established approaches such as the 5 A's strategy (*Ask, Assess, Advise, Agree, and Assist*) [23]. Progress must be made in stratifying obesity by combining BMI and waist circumference (WC) as screening tools, along with the waist-to-height ratio (WHtR), and to promote the analysis of body composition in health consultations, including initial evaluations and follow-up [20, 23].

2.4 The information gathered from the initial evaluation should be integrated to determine the severity of the disease, using tools like the Edmonton Obesity Staging System (EOSS) to guide therapeutic decision-making [24]. Evaluation of PwO must be continuous and regular [24].

2.5 Molecular markers and genetic studies can be helpful in defining obesity types. HCPs should be aware of the diagnostic criteria for monogenic obesity, which may have been undiagnosed during childhood [25].

Section 3. Treatment and multidisciplinary approach to obesity

3.1 Obesity management should be multidisciplinary, involving both primary and hospital HCPs with specific training in obesity. A multimodal and transversal approach is crucial, encompassing nutritional advice, physical activity and exercise, psychological support, obesity education, and pharmacological treatment, with bariatric surgery as an alternative when indicated [4, 26, 27] (**Fig. 1**).

3.2 Resources for obesity management should be offered to PwO under all circumstances and in a free stigma-environment [23].

3.3 Obesity treatment should be discussed early with the patient and consider previous experiences, incorporate all available options, be intensive, and be sustained over time.

3.4 Lifestyle interventions and psychological treatment should be prioritized to improve overall health outcomes [4].

3.5 There is no "one-size-fits-all" dietary or exercise pattern for PwO; dietary and physical activity plans should be tailored to the approach that best suits the patient [27, 28]. Diet therapy in obesity promotes healthy eating and avoids focusing exclusively on caloric intake [27].

3.6 When selecting pharmacological treatments for obesity, several factors must be considered: patient characteristics and preferences, type and presence of complications, mechanisms of action, dose escalation, route and administration interval, efficacy, adherence rates, potential contraindications, adverse effects, and cost [29-41] (**Fig. 2**) Pharmacological treatments for obesity are not currently covered by the National Healthcare System in Spain, but patients should be informed about the available options in a non-judgmental approach [42]. Currently in Spain, the drugs approved for obesity treatment are liraglutide 3.0 mg, semaglutide 2.4 mg, tirzepatide 5.0 and 10.0 mg, orlistat 120.0 mg, and the combination of extended-release bupropion/naltrexone. However, tirzepatide 15.0 mg and the bupropion/naltrexone combination are not currently under commercialization.

3.7 Endoscopic and surgical treatments are viable options that must be considered within the obesity treatment continuum [26]. Before these therapeutic approaches are pursued, PwO should undergo a thorough evaluation by a multidisciplinary team [26].

3.8 Healthcare authorities should recognize the inequity caused by the lack of public funding for pharmacological treatments for obesity and the limited access to bariatric procedures [43]. Ensuring access to dietitians/nutritionists, physical activity professionals and psychologists is also essential.

Section 4. Recommendations for obesity management in special populations

4.1 Special attention should be given to the impact of obesity at specific life stages, such as the transition to adulthood, the elderly, the reproductive and menopausal status in women, as well as its impact on reproductive health in either sex.

4.2 The therapeutic management of the components of metabolic syndrome and/or established cardiovascular and kidney diseases in PwO should include a combination of nutritional therapy, physical activity and exercise,

behavioural therapy, pharmacological options, and/or bariatric surgery, prioritizing strategies that have demonstrated significant cardiovascular and overall health benefits [29, 44-46].

4.3 Adverse clinical outcomes associated with weight gain and obesity have been identified during preconception, pregnancy, and postpartum periods [15, 26, 47]. Obesity affects reproductive health, decreasing fertility and the success of fertility treatments, and increasing risks for conditions such as male hypogonadism and polycystic ovary syndrome [22]. Obesity is linked to increased risks during pregnancy for both the mother and the foetus, and it also influences menopause-associated cardiovascular and metabolic risks [48]. Specific recommendations must be provided to optimize weight and nutritional status before planning a pregnancy, aimed at reducing health risks for women and ensuring children health both in the short and long term [2].

4.4 Children and adolescents with obesity often carry the burden of the disease and its comorbidities into adulthood, increasing the risk of premature mortality and complications [26]. Obesity has a significantly impact on their psychological and emotional health, leading to increased stress, depressive symptoms, and low self-esteem [49]. Collaboration and development of specific strategies between paediatric teams and the HCPs who will monitor these patients in adulthood are essential [49].

4.5 Obesity in the elderly is associated with a worsening of coexisting chronic comorbidities [50, 51]. Osteosarcopenic obesity should be assessed in this population, as it can lead to impaired body functions, increased fragility and disability, and mortality [4, 52]. The therapeutic approach for elderly PwO must always consider factors such as nutritional deficiencies, physical inactivity and sedentarism, polypharmacy, coexistence of cognitive disorders, and concomitant catabolic diseases [4, 51, 53].

Section 5. Implementation of the guideline and future challenges

5.1 A proactive commitment by scientific societies and government agencies is essential to ensure the correct implementation of the recommendations and measures proposed in the GIRO guideline.

5.2 Budgetary resources must be allocated to obesity management to halt the rise in adult obesity. This should include a National Strategic Plan for Adult Obesity in Spain to ensure: 1) the implementation of efficient obesity prevention strategies and health policies, and 2) access for patients to the most efficient, safe, and effective non-pharmacological, pharmacological, endoscopic, and/or surgical treatments, including treatment funding.

5.3 The scientific societies participating in the GIRO guideline commit to monitoring the main health indicators related to obesity at 3- and 5-years post-publication to assess the impact of their implementation. Specifically, the following key indicators will be evaluated: 1) the establishment of multidisciplinary obesity units; 2) the development of transition programs to adulthood; 3) the increase in human and material resources in primary care, including body composition equipments, and support from obesity-trained HCP including nutritionists, physical exercise professionals, nurses, psychological and social workers; 4) the quality and type of information collected (medical, dietary, physical activity, and psychological history) in the clinical record for the diagnosis and follow-up of obesity.

Besides the recommendations and conclusions provided in the GIRO guideline, several key messages, referred to as “GIROs” (“turns” or “shifts”), were defined to emphasize the main changes to be addressed in the five sections of the GIRO guideline (**Supplementary Table 1**). A selection of the top 10 “GIROs” proposed to lead the shift in obesity management is presented in **Fig.3**

DISCUSSION

The GIRO guideline has been designed to provide updated information on obesity management, identify unmet needs in Spain, and offer solutions for both the short and long term. These solutions require collaboration among various stakeholders, including scientific societies, government agencies, and patients, to implement social and healthcare measures that guarantee both quality care for PwO and efficient prevention strategies for this disease. The GIRO guideline is organized into five areas related to obesity management, aimed at help develop policies to tackle the disease and its comorbidities in Spain. These areas address major needs in PwO healthcare: 1) recognizing obesity as a chronic and multifactorial disease, leaving no room for stigma or discrimination; 2) moving beyond BMI to incorporate morphofunctional studies and phenotyping of PwO; 3) promoting a multidisciplinary approach that starts early, integrates all available options, and is intensive and sustained over

time; 4) giving special attention to obesity at specific life stages and/or in association with other pathologies; and 5) facing present and future challenges in obesity.

Though obesity is recognized as a chronic disease by health authorities, there is a lack of collaboration among government institutions, medical societies, and patient associations to promote public campaigns for obesity recognition in adults, as well as awareness and prevention at the societal level. Additionally, as health services for PwO vary between regions and health centres, resulting in heterogeneous approaches to care, it is essential to analyse existing inequities and implement measures to ensure an equitable access to resources [54].

Obesity requires a multidisciplinary approach, especially in patients with comorbidities, although transdisciplinary teams are scarce in Spain. Comprehensive care programmes, including standardized protocols and establishing nationally agreed action criteria should be developed, enabling coordination between primary care professionals and specialists, including endocrinologists, dietitians-nutritionists, physical medicine and rehabilitation physicians, psychologists, exercise professionals, internists, surgeons, specialised nurses, and social workers [55]. It is important for scientific societies and professionals to create programs that address the complexity of the disease and its management [56]. Likewise, the integration and unification of guidelines and criteria for the screening, diagnosis, and classification of obesity in clinical practice should be advocated. Finally, efforts should be made to increase the number of accredited obesity units by both the European Association for the Study of Obesity (EASO) and SEEDO in Spain, and to launch an accreditation program for primary healthcare teams and paediatric obesity units [57].

In the social and governmental spheres, awareness campaigns should address four major challenges: 1) the preventive challenge, implementing public healthcare measures and awareness campaigns to promote healthy lifestyles; 2) the diagnostic challenge, achieving early diagnosis of the disease; 3) the therapeutic challenge, ensuring patients' equitable access to the most efficient, safe, and effective treatments; and 4) the accompaniment challenge, developing personalised, long-term monitoring programs to help patients avoid weight regain.

Recognizing obesity as a disease and treating PwO with dignity should be priorities for the medical community. Communication strategies, such as motivational interviews, should be implemented when treating patients to address weight-related issues and discuss therapeutic options enabling personalised care and shared decision-making. Additionally, monitoring PwO with digital tools for personalised support in clinical practice could facilitate their transition to a healthier state. Implantation of continuous education programs directed to HCP, PwO and their families, as well as to the general population will be essential to prevent weight bias and stigmatization, avoiding inequities in the access to obesity management.

The coordination of clinical, training and research efforts is essential to ensure equitable care in the diagnosis and treatment of obesity. Research is needed on the efficacy of pharmacological treatments in specific patient subpopulations, as well as cost-effectiveness studies of therapeutic strategies, predictors of treatment response, and studies aimed at identifying lifestyle patterns that protect against obesity. These studies, along with artificial intelligence approaches, should focus on applying precision medicine to obesity and identifying patients at risk of complications to devise individualized strategies [58].

CONCLUSION

The GIRO guideline represents a significant shift in the management of obesity in Spain, addressing this condition as a chronic, multifactorial disease that requires a personalized and stigma-free approach. With the collaboration of numerous scientific societies and patient associations, evidence-based recommendations have been proposed to promote multidisciplinary care, enhance the evaluation and treatment of obesity, and implement inclusive public health policies. This comprehensive approach not only improves the quality of life for individuals living with obesity but also aims to reduce the economic and social burden of obesity on the Spanish healthcare system. By redefining obesity management strategies, the GIRO guideline has the potential to positively influence public health, fostering a lasting change in the perception and treatment of this condition.

ACKNOWLEDGEMENT

We thank Gloria González, Nerea Toro and Marta Barragán from Adelphi Targis S. L., for their outstanding work in medical consultancy and writing.

The authors would like to thank Nicole Pierce and Obesity Canada, as well as Ximena Ramos, for their inspiring support and help in the elaboration of the GIRO guideline.

We would like to thank all the scientific societies and their representatives that have collaborated in the development of the GIRO Guideline: *Catalan Society of Family and Community Medicine (CAMFIC)*; *Exercise and Health Spanish Research Network (EXERNET)*; *General Council of Official Colleges of Psychologists (COP)*; *National Association of Health Reporters (ANIS)*; *Portuguese Society of Endocrinology, Diabetes, and Metabolism (SPEDM)*; *RedGDPS Foundation (RedGDPS)*; *Spanish Association of Clinical Psychology and Psychopathology (AEPCP)*; *Spanish Association of Nursing and Health (AEES)*; *Spanish Association of Specialists in Occupational Medicine (AEEMT)*; *Spanish Association for the Study of the Liver (AEEH)*; *Spanish Association of Urology (AEU)*; *Spanish Society of Anesthesiology, Resuscitation, and Pain Therapy (SEDAR)*; *Spanish Society of Clinical, Family, and Community Pharmacy (SEFAC)*; *Spanish Society of Clinical Nutrition and Metabolism (SENPE)*; *Spanish Diabetes Society (SED)*; *Spanish Society of Dietetics and Nutrition (SEDYN)*; *Spanish Society of Digestive Diseases (SEPD)*; *Spanish Society of Digestive Endoscopy (SEED)*; *Spanish Society of Endocrinology and Nutrition (SEEN)*; *Spanish Society of Family and Community Medicine (semFYC)*; *Spanish Society of General and Family Doctors (SEMG)*; *Spanish Society of Geriatrics and Gerontology (SEGG)*; *Spanish Society of Gynecology and Obstetrics (SEGO)*; *Spanish Society of Healthcare Executives (SEDISA)*; *Spanish Society of Hematology and Hemotherapy (SEHH)*; *Spanish Society of Hospital Pharmacy (SEFH)*; *Spanish Society of Internal Medicine (SEMI)*; *Spanish Society of Medical Oncology (SEOM)*; *Spanish Society of Nephrology (SEN)*; *Spanish Society of Obesity and Metabolic Surgery (SECO)*; *Spanish Society of Otorhinolaryngology and Head and Neck Surgery (SEORL)*; *Spanish Society of Paediatric Endocrinologists (SEEP)*; *Spanish Society of Periodontology (SEPA)*; *Spanish Society of Plastic, Reconstructive, and Aesthetic Surgery (SECPRE)*; *Spanish Society of Pneumology and Thoracic Surgery (SEPAR)*; *Spanish Society of Primary Care Physicians (SEMERGEN)*; *Spanish Society of Rehabilitation and Physical Medicine (SERMEF)*; *Spanish Society of Rheumatology (SER)*, and *Spanish Society for the Study of Obesity (SEEDO)*.

We also thank the patient and family associations for their invaluable collaboration in the review of Sections 1, 2, 4 and 5 of GIRO Guideline: *Alliance for Obesity*; *National Bariatric Association Hispalis (AB Hispalis)*; *National Federation of Associations for the Fight Against Kidney Diseases (ALCER)*; *National Federation of Liver Disease and Transplant Patients (FNETH)*; *Osteoarthritis Foundation International (OAFI)*; *Spanish Association of Gastroenterology (AEG)*; *Spanish Association of Patients with Chronic Obstructive Pulmonary Disease (COPD Spain)*; *Spanish Association for Support in Psychosis (AMAFE)*; *Spanish Association of Thyroid Cancer (AECAT)*; *Spanish Confederation of Alzheimer's and Other Dementias (CEAFA)*; *Spanish Federation of Diabetes (FEDE)*; and *The Spanish Heart Patients Association (Cardioalianza)*.

STATEMENT OF ETHICS

This clinical guideline was developed in compliance with ethical standards aimed at ensuring transparency, impartiality, and scientific integrity. No patient participation or review of patient data was involved in the creation of this guideline, and therefore, formal ethical approval from an Ethics Committee was not required.

The authors declare that all potential conflicts of interest have been disclosed and appropriately managed to avoid bias in the guideline development process. The recommendations presented are based on a thorough review of existing literature and expert consensus, with a commitment to providing reliable and unbiased guidance for healthcare professionals.

The guideline has been prepared with the intent to promote equitable and stigma-free care for individuals affected by obesity, in line with best practices and ethical principles.

CONFLICT OF INTEREST

SEEDO has paid honoraria to the expert authors of the GIRO guideline for their collaboration and has facilitated the participation of all of them in the meetings for the preparation and promotion of the guidelines. Some of the experts participating in the GIRO guideline had potential conflicts of interest in the 36 months prior to their participation in this project. These are described below:

AL declares having received fees for conferences from AstraZeneca, Boehringer Ingelheim, Novo Nordisk, Eli Lilly and Pronokal; for clinical trials from Amgen, AstraZeneca, Boehringer Ingelheim, Lilly and Novo Nordisk; grants and scholarships for research from *Diputació de Lleida*, *Instituto de Salud Carlos III* and Pfizer; by Advisory Board from Boehringer Ingelheim, Eli Lilly, Novo Nordisk, Pronokal and by being contracted by the *Institut Català de la Salut* (ICS).

SA declares having received fees for conferences, collaborations and scientific advice from Abbott, Amgen, Astrazeneca, Boehringer Ingelheim, Daiichi, Dexcom, Lilly, Medtronic, Menarini, Novartis, Novo Nordisk, Roche, and Sanofi. SA also declares to belong to the Endocrinology and Nutrition Service of the *Hospital Universitario Infanta Sofía* (Madrid); and to be an associate professor at the *Universidad Europea de Madrid*, outside the work presented.

EB declares participation in a research project partially funded by Menarini S.A. (Spain); and being director of the Document Management Committee and advisory member of the Quality Committee of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR), and Editor-in-Chief of the European Respiratory Journal Open Research of the European Respiratory Society, outside the submitted work.

GB declares no conflict of interest outside of the work submitted.

JC declares having received consulting, speaking or clinical trial fees from Abbot Nutrition, Boehringer-Ingelheim, Lilly and Novo Nordisk.

AC declares participation in the Data Monitoring Committee of Boehringer Ingelheim SYNCRONIZE clinical trial programme, and having received fees for Advisory Board, training activities, symposiums and congress attendance from Astra Zeneca, Boehringer Ingelheim, Eli Lilly and Novo Nordisk.

JMF declares having received fees for presentations at congresses from Almirall, Fresenius, Lilly, Novo Nordisk, Organon, Ordesa, and Viatrix.

LF declares to have received collaboration for lectures from Lilly and Novo Nordisk.

AdH declares receiving speaking fees from Almirall, Esteve, Lilly and Novo Nordisk; consultancy fees from Lilly; and clinical trial research contracts from Boehringer, Lilly and Novo Nordisk.

EM declares no conflict of interest outside of the work submitted.

IM declares having received fees for Advisory Boards, lectures, or funding for courses or conferences from AstraZeneca, Boehringer Ingelheim, Daichii-Sankyo, Lilly, Novo Nordisk and Aventis-Sanofi.

VM declares having received speaking fees from Novo Nordisk and Adventia Pharma.

CM reports receiving research and speaking fees from Amgen, AstraZeneca, Boehringer Ingelheim, Lilly, Merck, Novartis, Novo Nordisk and Sanofi.

VR declares no conflict of interest outside of the work submitted.

JS declares having received fees for coordination and moderation of the Annual Obesity Meetings 2020, 2021, 2023 and 2024 from Novo Nordisk; for lectures and teaching activities from Lilly and Novo Nordisk; and having participated in clinical trials and studies sponsored by Novo Nordisk.

MJS declares having received fees for contracted consultancy and travel support for contracted activities from AstraZeneca, Bayer, Boehringer Ingelheim, Esteve, Fresenius, GSK, ICU Medical, Jansen, Lilly, Mundipharma, Novo Nordisk, Otsuka, Sanofi, Travere Therapeutics and Vifor; grants from Boehringer Ingelheim, Instituto de Salud Carlos III, *Fundación Senefro* and *Ministerio de Ciencia e Innovación*, Marató TV3, ERA PerMed2022; and consultation fees from AstraZeneca, Bayer, Boehringer Ingelheim, GE Healthcare, ICU Medical, Jansen, Medice, Mundipharma, Novo Nordisk and Vifor.

MS declares having received conference grants from Novo Nordisk.

VV declares no conflict of interest outside of the work submitted.

GV declares research contracts with the Zaragoza City Council, being an expert of the Advisory Committees of the National Commission for the Evaluation of Research Activity, being president of the Physical Exercise and Health Network (EXERNET) and member of the European College of Sport Science (ECSS), outside of the work presented.

NV declares having received fees from Adventia Pharma, Boehringer Ingelheim, Lilly and Novo Nordisk.

MMM declares having received fees for presentations at conferences and workshops organized by Lilly España and Novo Nordisk.

FUNDING SOURCES

The GIRO project (including the guideline elaboration and manuscript publication) has been promoted and driven by the SEEDO, through a non-conditional grant from Novo Nordisk Spain. The funder (Novo Nordisk Spain) had no role in the guideline nor the manuscript conception, planning nor decision to publish.

AUTHOR CONTRIBUTIONS

All authors (AL, SA, EB, GB, JC-G, AC, JMF, LF, AdH, EM, IM, VM, CM, VR, JS, MJS, MS, VV, GV-M, NV and MMM) have made substantial contributions to the conception and design of the work, have participated in critically revising the manuscript for its intellectual content, have approved the final version of the manuscript, and have agreed to be accountable for all aspects of the work. AL and MMM have coordinated the entire elaboration process of the work and have drafted the initial version of the manuscript.

DATA AVAILABILITY

The GIRO guideline is available at: <https://www.seedo.es/index.php/guia-giro>.

REFERENCES

1. Gutiérrez-González E, García-Solano M, Pastor-Barriuso R, Fernández de Larrea-Baz N, Rollán-Gordo A, Peñalver-Argüeso B, et al. Socio-geographical disparities of obesity and excess weight in adults in Spain: insights from the ENE-COVID study. *Front Public Health*. 2023;11: Jul 17:11:1195249. doi: 10.3389/fpubh.2023.1195249. eCollection 2023
2. Townsend N, Vogel C, Allender S, et al. WHO European Regional Obesity: Report 2022. Copenhagen: WHO Regional Office for Europe; 2022 Licence CC BY-NC-SA 3.0 IGO [cited 2024 Sep 16]. Available from: <https://apps.who.int/iris/handle/10665/353747>. Accessed 16 Sep 2024
3. Lobstein T, Jackson-Leach R, Powis J, Brinsden H, Gray M. World Obesity Atlas 2023. [cited 2024 Sep 16]. Available from: www.johnclarksondesign.co.uk.
4. Ballesteros Pomar MD, Vilarrasa García N, Rubio Herrera MÁ, Barahona Constanzo MJ, Bueno Díez M, Caixàs i Pedragós A, et al. Abordaje clínico integral SEEN de la obesidad en la edad adulta: resumen ejecutivo. *Endocrinol. Diabetes Nutr*. 2021;68(2):130–136. doi: 10.1016/j.endinu.2020.05.003.
5. Twells LK, Janssen I, Kuk JL. Epidemiology of Adult Obesity. Canadian Adult Obesity Clinical Practice Guidelines. 2020 [cited 2024 Sep 16]. Available from: <https://obesitycanada.ca/wp-content/uploads/2020/08/2-Epidemiology-of-Adult-Obesity-4-FINAL.pdf>.
6. Preiss Contreras Y, Ramos Salas X, Ávila Oliver C, Saquimux Contreras MA, Muñoz Claro R, Canales Ferrada C. Obesidad en adultos: guía de práctica clínica adaptada para Chile. *Medwave*. 2022;22(10):e2649. doi: 10.5867/medwave.2022.10.2649.
7. Wharton S, Lau DCW, Vallis M, Sharma AM, Biertho L, Campbell-Scherer D, et al. Obesity in adults: A clinical practice guideline. *CMAJ*. 2020;192(31):E875–E891. doi: 10.1503/cmaj.191707.
8. Breen C, O’Connell J, Geoghegan J, O’Shea D, Birney S, Tully L, et al. Obesity in Adults: A 2022 Adapted Clinical Practice Guideline for Ireland. *Obes Facts*. 2022;15(6):736–752. doi: 10.1159/000527131.
9. Pearce N. Canadian Adult Obesity Clinical Practice Guidelines. Obesity Canada. [cited 2024 Sep 16]. Available from: <https://obesitycanada.ca/guidelines/>.
10. Brouwers MC, Kho ME, Browman GP, et al. AGREE II: advancing guideline development, reporting and evaluation in health care. *Can Med Assoc J*. 2010; 182:E839–E842
Brouwers MC, Kho ME, Browman GP, Burgers JS, Cluzeau F, Feder G, et al. AGREE II: advancing guideline development, reporting and evaluation in health care. *CMAJ*. 2010;182(18):E839-42. doi: 10.1503/cmaj.090449.
11. BMJ Best Practice. Siemieniuk R, Guyatt G. What is GRADE? [cited 2024 Sep 16]. Available from: <https://bestpractice.bmj.com/info/us/toolkit/learn-ebm/what-is-grade/>.
12. Lecube A, Azriel S, Barreiro E, Blay G, Carretero J, Ciudin A, et al. Guía Española GIRO: guía española del manejo integral y multidisciplinar de la obesidad en personas adultas, 2024. [cited 2024 Sep 16]. Available from: <https://www.seedo.es/index.php/guia-giro>.
13. Prospective Studies Collaboration. Body-mass index and cause-specific mortality in 900 000 adults: collaborative analyses of 57 prospective studies. *The Lancet*. 2009;373(9669):1083–1096.

14. Nutter S, Eggerichs LA, Nagpal TS, Ramos X, Chin C, Saiful S, et al. Changing the global obesity narrative to recognize and reduce weight stigma: A position statement from the World Obesity Federation. *Obes. Rev.* 2024;25(1):e13642. doi: 10.1111/obr.13642.
15. Ciudin A, Fidilio E, Gutiérrez-Carrasquilla L, Caixàs A, Vilarrasa N, Pellitero N, et al. A Clinical-Genetic Score for Predicting Weight Loss after Bariatric Surgery: The OBEGEN Study. *J Pers Med.* 2021;11(10):1040. doi: 10.3390/jpm11101040.
16. Lawrence BJ, Kerr D, Pollard CM, Theophilus M, Alexander E, Haywood D, et al. Weight bias among health care professionals: A systematic review and meta-analysis. *Obesity (Silver Spring, Md.).* 2021;29(11):1802–1812. doi.org/10.1002/oby.23266.
17. Kawai T, Autieri M V., Scalia R. Adipose tissue inflammation and metabolic dysfunction in obesity. *Am. J. Physiol. Cell Physiol.* 2021;320(3):C375–C391. doi: 10.1152/ajpcell.00379.2020.
18. World Obesity Federation (WOF). The do's and don'ts when talking about obesity. [cited 2024 Apr 2]. Available from: https://www.worldobesity.org/downloads/healthy_voices_downloads/HV_Language_guidelines.pdf.
19. Rueda-Clausen CF, Poddar M, Lear SA, Poirier P, Sharma AM. Assessment of People Living with Obesity. The Canadian Adult Obesity Clinical Practice Guidelines. [cited 2024 Sep 16]. Available from: <https://obesitycanada.ca/guidelines/assessment>.
20. Busetto L, Dicker D, Frühbeck G, Halford JCG, Sbraccia P, Yumuk V, et al. A new framework for the diagnosis, staging and management of obesity in adults. *Nat Med.* 2024;30(9):2395–2399. doi: 10.1038/s41591-024-03095-3.
21. Hassapidou M, Vlassopoulos A, Kalliostra M, Govers E, Mulrooney H, Ells L, et al. European Association for the Study of Obesity Position Statement on Medical Nutrition Therapy for the Management of Overweight and Obesity in Adults Developed in Collaboration with the European Federation of the Associations of Dietitians. *Obes Facts.* 2023;16(1):11–28. doi: 10.1159/000528083.
22. Garvey WT, Mechanick JL, Brett EM, Garber AJ, Hurley DL, Jastreboff AM, et al. American Association of Clinical Endocrinologists and American College of Endocrinology Comprehensive Clinical Practice Guidelines for Medical Care of Patients with Obesity. *Endocr Pract.* 2016;22(Suppl 3):1–203. doi: 10.4158/EP161365.GL.
23. Vallis M, Piccinini-Vallis H, Sharma AM, Freedhoff Y. Modified 5 As Minimal intervention for obesity counseling in primary care Clinical Review. *Can. Fam. Physician.* 2013;59(1):27–31.
24. Kuk JL, Ardern CI, Church TS, Sharma AM, Padwal R, Sui X, et al. Edmonton obesity staging system: Association with weight history and mortality risk. *Appl. Physiol. Nutr. Metab.* 2011;36(4):570–576. doi: 10.1139/h11-058.
25. Loos RJF, Yeo GSH. The genetics of obesity: from discovery to biology. *Nat Rev Genet.* 2022;23(2):120–133. doi: 10.1038/s41576-021-00414-z.
26. Eisenberg D, Shikora SA, Aarts E, Aminian A, Angrisani L, Cohen RV, et al. 2022 American Society for Metabolic and Bariatric Surgery (ASMBS) and International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO): Indications for Metabolic and Bariatric Surgery. *Surg. Obes. Relat. Dis.* 2022;18(12):1345–1356. doi: 10.1016/j.soard.2022.08.013.
27. Brown J, Clarke C, Johnson-Stoklossa C, Sievenpiper J. Medical Nutrition Therapy in Obesity Management. Canadian Adult Obesity Clinical Practice Guidelines. 2020. [cited 2024 Sep 16]. Available from: <https://obesitycanada.ca/guidelines/nutrition>.
28. Donate FI, Sanchez-Oliver AJ, Benito PJ, Heredia Elvar JR, Suárez-Carmona W, Butragueño J. Guía para el diseño de programas de intervención en población con obesidad: Documento de Posicionamiento del Grupo Ejercicio Físico de la Sociedad Española de Estudio de la Obesidad (SEEDO). *Retos.* 2023;50:33–49.
29. Piché ME, Tchernof A, Després JP. Obesity Phenotypes, Diabetes, and Cardiovascular Diseases. *Circ Res.* 2020;126(11):1477–1500. doi: 10.1161/CIRCRESAHA.120.316101.
30. Wilding JPH, Batterham RL, Calanna S, Davies M, Van Gaal LF, Lingvay I, et al. Once-Weekly Semaglutide in Adults with Overweight or Obesity. *N Engl J Med.* 2021;384(11):989–1002. doi: 10.1056/NEJMoa2032183.
31. Jastreboff AM, Aronne LJ, Ahmad NN, Wharton S, Connery L, Alves B, et al. Tirzepatide Once Weekly for the Treatment of Obesity. *N Engl J Med.* 2022;387(3):205–216. doi: 10.1056/NEJMoa2206038.

32. Lincoff AM, Brown-Frandsen K, Colhoun HM, Deanfield J, Emerson SS, Esbjerg S, et al. Semaglutide and Cardiovascular Outcomes in Obesity without Diabetes (SELECT Study). *N Engl J Med*. 2023;389(24):2221–2232. doi: 10.1056/NEJMoa2307563.
33. Mok J, Adeleke MO, Brown A, Magee CG, Firman C, Makahamadze C, et al. Safety and Efficacy of Liraglutide, 3.0 mg, Once Daily vs Placebo in Patients With Poor Weight Loss Following Metabolic Surgery: The BARI-OPTIMISE Randomized Clinical Trial. *JAMA Surg*. 2023;158(10):1003-1011. doi: 10.1001/jamasurg.2023.2930.
34. Malhotra A, Grunstein RR, Fietze I, Weaver TE, Redline S, Azarbarzin A, et al. Tirzepatide for the Treatment of Obstructive Sleep Apnea and Obesity. *N Engl J Med*. 2024;391(13):1193-1205. doi: 10.1056/NEJMoa2404881.
35. Perkovic V, Tuttle KR, Rossing P, Mahaffey KW, Mann JFE, Bakris G, et al. Effects of Semaglutide on Chronic Kidney Disease in Patients with Type 2 Diabetes. *N Engl J Med*. 2024;391(2):109–121. doi: 10.1056/NEJMoa2403347.
36. Davies M, Færch L, Jeppesen OK, Jeppesen OK, Pakseresht A, Pedersen SD, et al. Semaglutide 2·4 mg once a week in adults with overweight or obesity, and type 2 diabetes (STEP 2): a randomised, double-blind, double-dummy, placebo-controlled, phase 3 trial. *The Lancet*. 2021;397(10278):971–984. doi: 10.1016/S0140-6736(21)00213-0.
37. Garvey WT, Frias JP, Jastreboff AM, le Roux CW, Sattar N, Aizenberg D, et al. Tirzepatide once weekly for the treatment of obesity in people with type 2 diabetes (SURMOUNT-2): a double-blind, randomised, multicentre, placebo-controlled, phase 3 trial. *The Lancet*. 2023;402(10402):613–626. doi: 10.1016/S0140-6736(23)01200-X.
38. Jamal M, Alhashemi M, Dsouza C, Al-hassani S, Qasem W, Almazeedi S, et al. Semaglutide and Tirzepatide for the Management of Weight Recurrence After Sleeve Gastrectomy: A Retrospective Cohort Study. *Obes Surg*. 2024;34(4):1324–1332. doi: 10.1007/s11695-024-07137-0.
39. Miras AD, Pérez-Pevida B, Aldhwayan M, Kamocka A, McGlone EM, Al-Najim W, et al. Adjunctive liraglutide treatment in patients with persistent or recurrent type 2 diabetes after metabolic surgery (GRAVITAS): a randomised, double-blind, placebo-controlled trial. *Lancet Diabetes Endocrinol*. 2019;7(7):549–559. doi: 10.1016/S2213-8587(19)30157-3.
40. Kosiborod MN, Abildstrøm SZ, Borlaug BA, Butler J, Rasmussen S, Davies M, et al. Semaglutide in Patients with Heart Failure with Preserved Ejection Fraction and Obesity. *N Engl J Med*. 2023;389(12):1069–1084. doi: 10.1056/NEJMoa2306963.
41. McGowan BM, Bruun JM, Capehorn M, Pedersen SD, Pietiläinen KH, Muniraju HAK, et al. Efficacy and safety of once-weekly semaglutide 2·4 mg versus placebo in people with obesity and prediabetes (STEP 10): a randomised, double-blind, placebo-controlled, multicentre phase 3 trial. *Lancet Diabetes Endocrinol*. 2024;12(9):631–642. doi: 10.1016/S2213-8587(24)00182-7.
42. Ministerio de Sanidad. BIFIMED: Buscador de la Información sobre la situación de financiación de los medicamentos - Nomenclátor de Noviembre 2023. [cited 2024 Sep 16]. Available from: <https://www.sanidad.gob.es/profesionales/medicamentos.do?metodo=verDetalle&cn=758089>.
43. Forhan M, Ramos Salas X. Inequities in Healthcare: A Review of Bias and Discrimination in Obesity Treatment. *Can J Diabetes*. 2013;37(3):205–209. doi: 10.1016/j.jcjd.2013.03.362.
44. Forhan M, Grand C, Hung P. Enabling Participation in Activities of Daily Living for People Living with Obesity. *Canadian Adult Obesity Clinical Practice Guidelines*. 2020. [cited 2024 Sep 16]. Available from: <https://obesitycanada.ca/wp-content/uploads/2020/08/5-Activities-of-Daily-Life-v4-with-links.pdf>.
45. Ryan DH, Lingvay I, Colhoun HM, Deanfield J, Emerson SS, Kahn SE, et al. Semaglutide Effects on Cardiovascular Outcomes in People With Overweight or Obesity (SELECT) rationale and design. *Am Heart J*. 2020; 229:61–69. doi: 10.1016/j.ahj.2020.07.008.
46. Kwok CS, Pradhan A, Khan MA, Anderson SG, Keavney BD, Myint PK, et al. Bariatric surgery and its impact on cardiovascular disease and mortality: A systematic review and meta-analysis. *Int J Cardiol*. 2014;173(1):20–28. doi: 10.1016/j.ijcard.2014.02.026.
47. Piccinini-Vallis H, Adamo K, Bell R, Pereira L, Nerenberg K. (2020) Weight Management Over the Reproductive Years for Adult Women with Obesity. *Canadian Adult Obesity Clinical Practice Guidelines*. [cited 2024 Sep 16]. Available from: <https://obesitycanada.ca/guidelines/reproductive/>.
48. Creanga AA, Catalano PM, Bateman BT. Obesity in Pregnancy. *N Engl J Med*. 2022;387(3):248–259. doi: 10.1056/NEJMra1801040.

49. Hampl SE, Hassink SG, Skinner AC, Armstrong SC, Barlow SE, Bolling CF, et al. Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity. *Pediatrics*. 2023;151(2):e2022060640. doi: 10.1542/peds.2022-060640.
50. Kuk JL, Wicklum SC, Twells LK (2020) Prevention and Harm Reduction of Obesity (Clinical Prevention). Canadian Adult Obesity Clinical Practice Guidelines. [cited 2024 Sep 16]. Available from: <https://obesitycanada.ca/guidelines/prevention>.
51. Haywood C, Sumithran P. Treatment of obesity in older persons—A systematic review. *Obes. Rev.* 2019;20(4):588–598. doi: 10.1111/obr.12815.
52. Ormsbee MJ, Prado CM, Ilich JZ, Purcell S, Siervo M, Folsom A, et al. Osteosarcopenic obesity: the role of bone, muscle, and fat on health. *J Cachexia Sarcopenia Muscle*. 2014;5(3):183–192. doi: 10.1007/s13539-014-0146-x.
53. Pérez Martínez P, Gómez-Huelgas R, Casado Escribano PP, Arévalo-Lorido JC, Pérez-Soto MI, Carretero Gómez J, en representación del Grupo de Trabajo de Diabetes, Obesidad y Nutrición de la Sociedad Española de Medicina Interna. Approach to obesity in the elderly population: a consensus report from the Diabetes, Obesity and Nutrition Working Group of SEMI (Spanish Society of Internal Medicine). *Rev Clin Esp*. 2023;223(8):493–498. doi: 10.1016/j.rce.2023.05.007.
54. European Association for the Study of Obesity (EASO). Spain. [cited 2024 Sep 16]. Available from: <https://cdn.easo.org/wp-content/uploads/2020/06/03170622/EASO-SPAIN-A4.pdf>.
55. Morer C, Úbeda M, Ovejas A, Nogues R, López S, Guillaumet A, et al. Integrative and Collaborative Approach in the Chronic Management of Obesity in Primary and Tertiary Care Setting: Vall Hebron-SAP Muntanya Healthcare Route. *Obes Facts*. 2023;16(3):249–254. doi: 10.1159/000528207.
56. Salvador J, Vilarrasa N, Poyato F, Rubio MÁ. Perceptions, Attitudes, and Barriers to Obesity Management in Spain: Results from the Spanish Cohort of the International ACTION-IO Observation Study. *J Clin Med*. 2020;9(9):2834. doi: 10.3390/jcm9092834.
57. Tsigos C, Hainer V, Basdevant A, Finer N, Mathus-Vliegen E, Micic D, et al. Criteria for EASO-Collaborating Centres for Obesity Management. *Obes Facts*. 2011;4(4):329–333. doi: 10.1159/000331236.
58. Hurtado A MD, Acosta A. Precision Medicine and Obesity. *Gastroenterol Clin North Am*. 2021;50(1):127–139. doi: 10.1016/j.gtc.2020.10.005.

FIGURE LEGENDS

Figure 1. Algorithm of the GIRO guideline for obesity management.

* Drug treatment may also be initiated in patients with a BMI ≥ 27 kg/m² and at least one obesity-related comorbidity. The maximum or maintenance dose or the maximum tolerated dose must be reached. At the time of writing the GIRO guideline, the drugs approved by both the EMA and the AEMPS for pharmacological treatment of obesity were: liraglutide 3.0 mg, semaglutide 2.4 mg, tirzepatide 5.0 and 10.0 mg, orlistat 120.0 mg, and the combination of extended-release bupropion/naltrexone. ** At present in Spain it would only be possible to combine incretin-based treatment with orlistat. *** Although the effectiveness and durability of endoscopy's

benefits may be lower, the same quality criteria applied to bariatric surgery should still be required. The evidence in favor of surgical treatment is greater than in favor of endoscopic treatment.

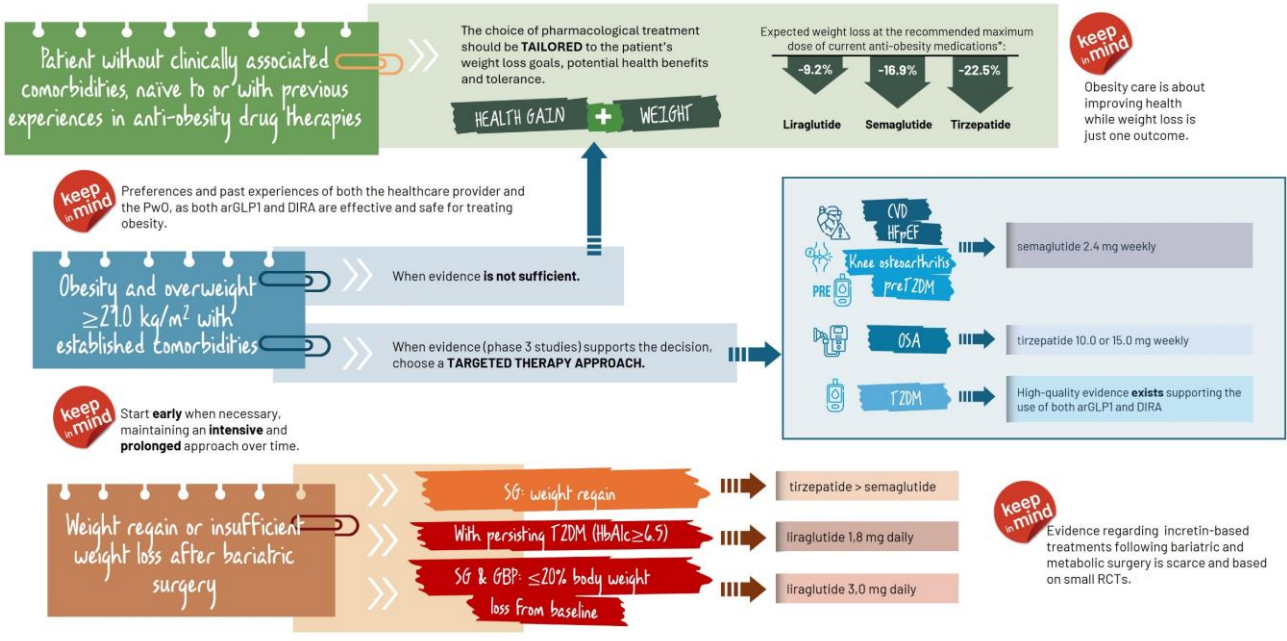
AEMPS: Spanish Agency for Medicines and Health Products; BMI: Body Mass Index; EMA: European Medicines Agency; VLCD: very low-calorie diet. Self-produced figure.

Figure 2. GIRO Guideline algorithm for the pharmacological management of obesity using incretin-based therapies.

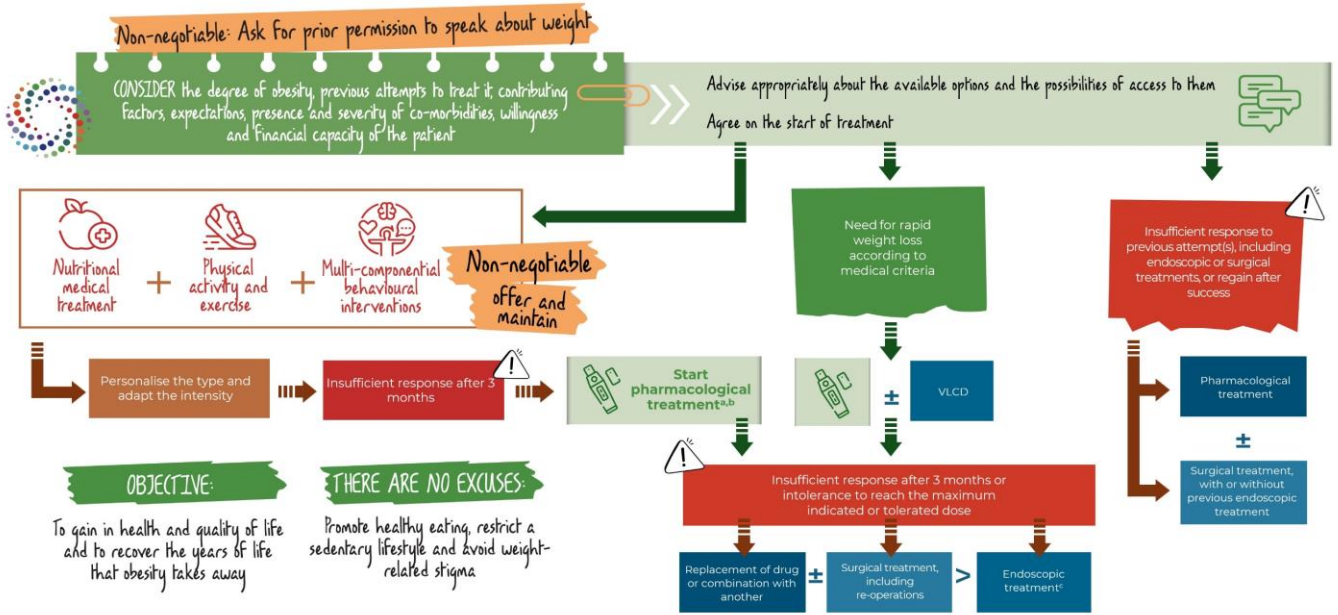
*According to their data sheet, liraglutide should be increased up to 3.0 mg (maintenance dose) or until the maximum tolerated dose is reached; semaglutide should be increased up to 2.4 mg (maintenance dose) or until the maximum tolerated dose is reached; and the recommended maintenance doses of tirzepatide are 5.0 mg, 10.0 mg, and 15.0 mg (in Spain, the 15 mg dose is not available). arGLP1: glucagon-like peptide 1 receptor agonists; CVD: cardiovascular disease; DIRA: dual-incretin receptor agonists; GBP: gastric bypass; HbA1c: hemoglobin A1C; HFpEF: heart failure with preserved ejection fraction; preT2DM: prediabetes mellitus type 2; SG: sleeve gastrectomy; T2DM: type 2 diabetes; OD: once daily; OSA: obstructive sleep apnea; OW: once weekly. Self-produced figure.

Figure 3. The top 10 “turns” proposed by the GIRO guideline.

CVD: Cardiovascular disease; HCP: healthcare professional; PC: Primary Care; PwO: People with Obesity; QoL: Quality of Life. Self-produced figure.



Accepted Manuscript



Accepted Manuscript



It is recommended to adopt a **comprehensive approach**, not focused solely on weight reduction, with the aim of **promoting lifestyle changes** that improve health parameters such as **QoL, psychological aspects** (general well-being, perception of body image), **metabolic and cardiovascular parameters, physical activity and exercise, and conscious eating**. **Health outcomes that the patient identifies as important** should be included.



Promote a diagnosis of obesity based on a **complete morphofunctional evaluation**, which includes anthropometric and body composition measurements, together with the evaluation of potential contributing factors, and possible complications and comorbidities, thus moving away from the classic approach based solely on BMI.



A patient's lack of motivation can never be a reason or justification for denying them access to the resources available for the management of the disease. Motivation is worked on, it fluctuates, it is not aesthetic and by itself it does not determine anything.



To prevent obesity, **special attention must be paid to the population that lives in socially and financially disadvantaged environments**, thus preventing an increase in social inequality in terms of healthy eating habits.



The degree of adherence to any dietary guideline is usually low, both in people with a healthy weight and in those with obesity, so the **stereotype of blaming** for lack of compliance must be eliminated.



When **choosing pharmacological treatment**, the patient's characteristics and preferences must be considered, as well as the presence and type of complications of the disease, the mechanism of action of the drug, the need for dose escalation, the route and interval of administration, efficacy, rate of adherence, possible contraindications, the incidence of adverse effects, and the cost. In the future, combination of anti-obesity drugs should also be considered.



The **need for intensive and early management** of obesity should be emphasised as a treatment for the components of metabolic syndrome and CVD.



Promote the **eradication of prejudices and stigmas about obesity through tools and programs that enable one to:**

Assess HCPs' own attitudes towards obesity, detect bias and promote change.

Analyse the presence of internalised bias in PWO.

Eliminate prejudice against obesity at all training levels in the healthcare field.



Obesity is a **chronic and recurrent disease**, with a global impact on the health of people who suffer from it, so it is **managed by many different teams, ranging from PC teams to multidisciplinary obesity units**. The criteria for referral from PC or other specialties to specialised obesity consultations must be adapted to the **resources, organization, and degree of coordination** of the different levels of care in each healthcare area.



The healthcare system must ensure **continuity of care** for adolescents with obesity, through the **collaboration of the PC and/or paediatric team** with the HCP or team who will monitor these patients during their adulthood.

Accepted Manuscript